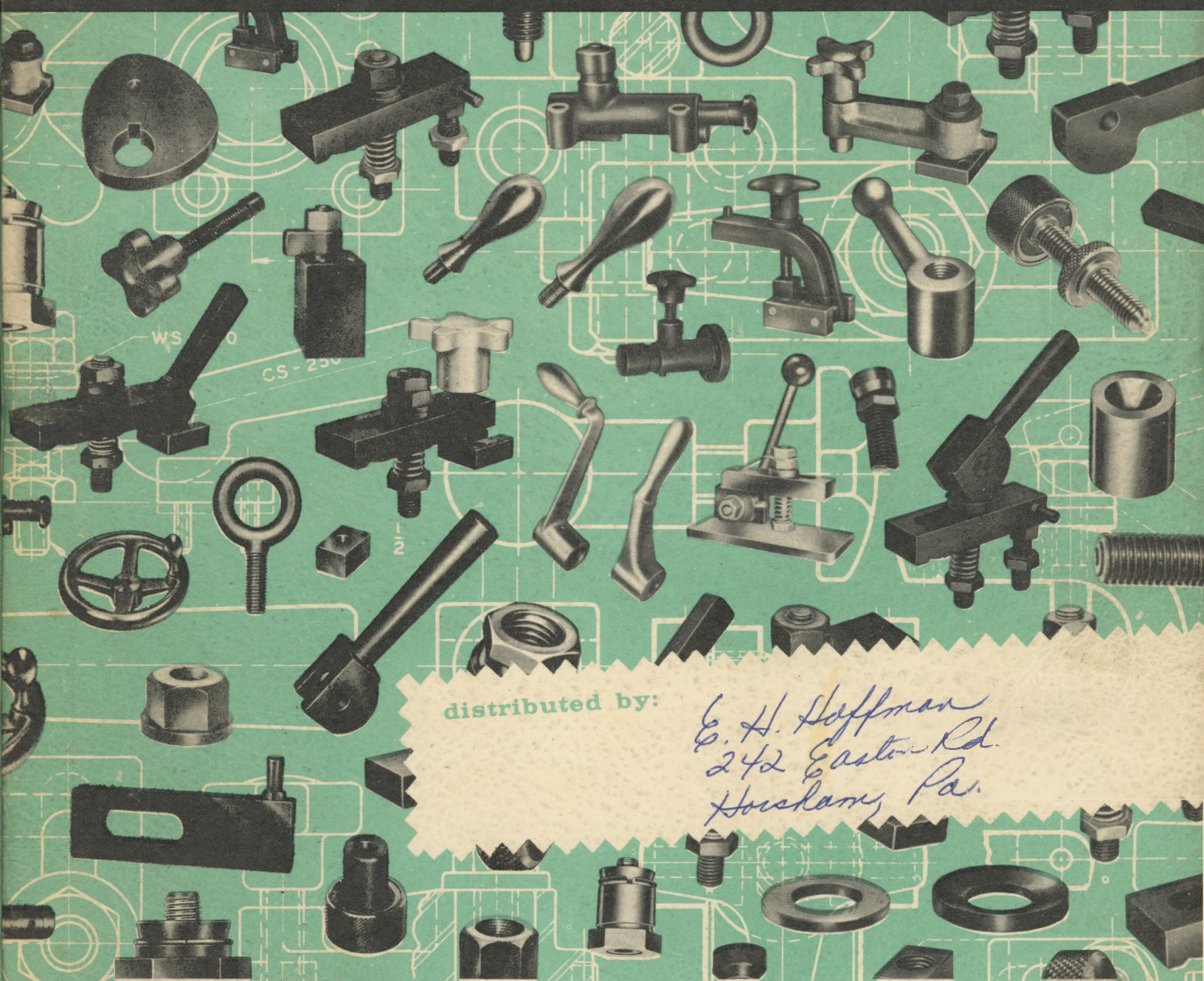


monroe

FIXTURE CLAMPS and DETAILS



distributed by:

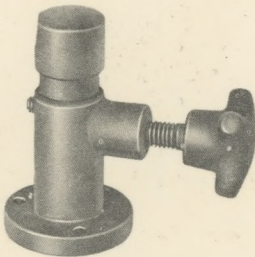
*E. H. Hoffman
242 Easton Rd.
Horseshoe, Pa.*

monroe Engineering Products Inc.

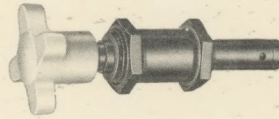
14830 FENKELL • DETROIT, MICHIGAN 48227

Assembly

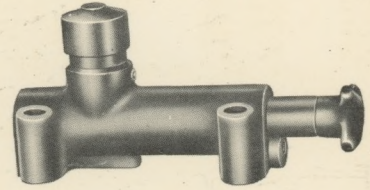
INDEX



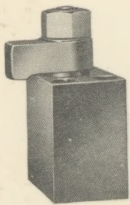
SPRING JACKS
Page 20



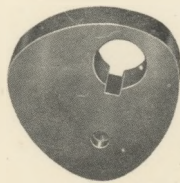
CAM LOCKS
Pages 21-22



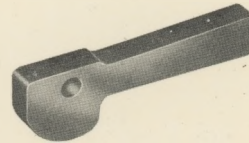
JACK LOCKS
Pages 23-24



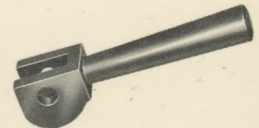
HOOK CLAMPS
Pages 25-26



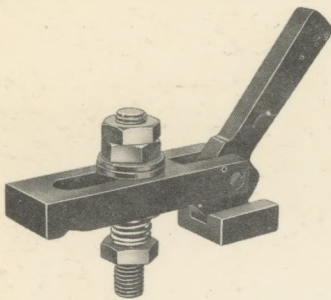
FIXTURE CAMS
Pages 27-28



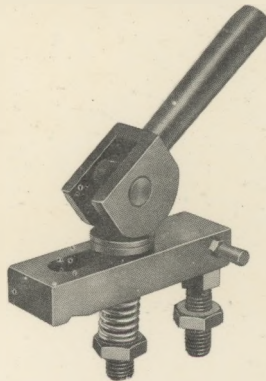
SINGLE CAMS
Page 30



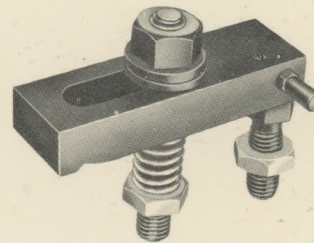
DOUBLE CAMS
Page 32



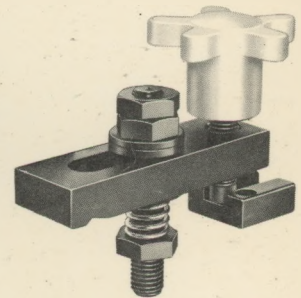
SINGLE CAM CLAMPS
Pages 29-30



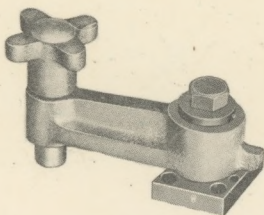
DOUBLE CAM CLAMPS
Pages 31-32



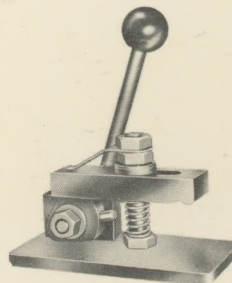
NUT CLAMPS
Pages 33-34



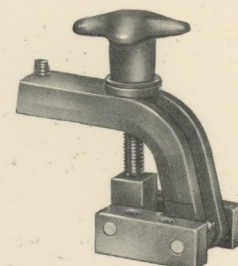
HEEL CLAMPS
Pages 35-36



SWING CLAMPS
Pages 37-38



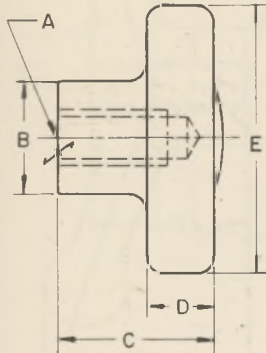
CAM LEVER CLAMPS
Pages 39-40



RETRACTING CLAMPS
Pages 41-42

< < < monroe > > >

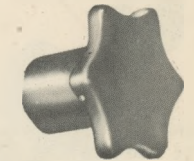
CAST IRON KNOB HANDLES



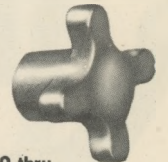
BLANK		TAPPED				REAMED				B	C	D	E
PART No.	PART No.	A	PART No.	A	PART No.	A	PART No.	A					
HKS-200	HKS-201	3/8-16	—	—	HKS-206	3/8	—	—	7/8	2	1/2	2	
HKS-270	HKS-271	1/2-13	HKS-272	5/8-11	HKS-275	1/2	HKS-276	5/8	1 1/4	1 1/4	1/2	2 3/4	
HKS-280	HKS-281	1/2-13	HKS-282	5/8-11	HKS-285	1/2	HKS-286	5/8	1 1/4	2	1/2	2 3/4	
HKS-350	HKS-351	3/4-10	—	—	HKS-355	3/4	—	—	1 5/8	1 1/2	5/8	3 1/2	
HK-110	HK-111	1/4-20	—	—	HK-116	1/4	—	—	9/16	3/4	3/8	1 1/8	
HK-150	HK-151	5/16-18	—	—	HK-155	5/16	—	—	5/8	7/8	3/8	1 1/2	
HK-200	HK-201	3/8-16	—	—	HK-205	5/16	HK-206	3/8	3/4	7/8	3/8	2	
HK-250	HK-251	1/2-13	HK-252	5/8-11	HK-256	1/2	HK-257	5/8	1 1/8	1 1/2	1/2	2 1/2	
HK-260	HK-261	1/2-13	—	—	—	—	—	—	1 1/8	2 1/4	1/2	2 1/2	
HK-300	HK-301	5/8-11	HK-302	3/4-10	HK-305	5/8	HK-306	3/4	1 3/8	1 3/4	1/2	3	

Castings are fine grain cast iron. They are tumbled to eliminate sharp corners. Face is machined square with hole. Cadmium plated. Specials made to order.

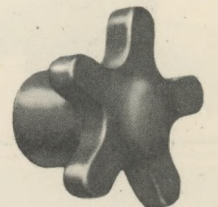
Aluminum blanks available. In ordering add suffix "AL" to part number.



HKS

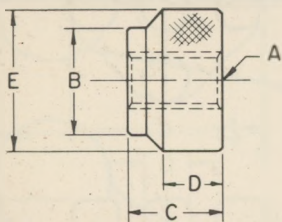


HK-110 thru
HK-260



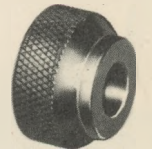
HK-300

KNURLED KNOB HANDLES



TAPPED				REAMED				B	C	D	E
Part No.	A	Part No.	A	Part No.	A	Part No.	A				
HKK-31	1/4-20	HKK-32	5/16-18	HKK-35	1/4	HKK-36	5/16	9/16	1/2	5/16	3/4
HKK-41	5/16-18	HKK-42	3/8-16	HKK-45	5/16	HKK-46	3/8	3/4	5/8	3/8	1
HKK-51	3/8-16	HKK-52	1/2-13	HKK-55	3/8	HKK-56	1/2	7/8	3/4	7/16	1 1/4

Handles are steel. Black Oxide finished.



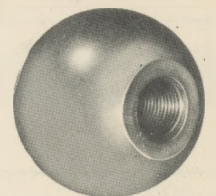
CONTROL HANDLES

OUTSIDE DIA.	BLANK	TAPPED							
	PART No.	PART No.	THREAD	PART No.	THREAD	PART No.	THREAD	PART No.	THREAD
1	HBS-10	HBS-11	1/4-20	HBS-12	1/4-28	HBS-13	5/16-18	HBS-14	5/16-24
1 1/2	HBS-15	HBS-16	3/8-16	HBS-17	3/8-24	HBS-18	1/2-13	HBS-19	1/2-20
2	HBS-20	HBS-21	1/2-13	HBS-22	1/2-20	HBS-23	5/8-11	HBS-24	5/8-18

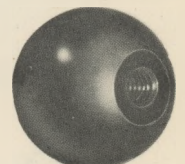
Full thread depth 1 1/2 times thread diameter. Polished finish.

OUTSIDE DIA.	LENGTH	PART No.	THREAD	PART No.	THREAD	PART No.	THREAD	PART No.	THREAD
3/4	—	—	—	HBP-7	10-32	—	—	—	—
1	—	HBP-11	1/4-20	HBP-12	1/4-28	HBP-13	5/16-18	HBP-14	5/16-24
1 3/8	—	HBP-16	3/8-16	HBP-17	3/8-24	HBP-18	1/2-13	HBP-19	1/2-20
1 7/8	—	HBP-21	1/2-13	HBP-22	1/2-20	—	—	HBP-24	5/8-18
1 1/8	1 1/16	HOP-11	1/4-20	HOP-12	5/16-18	HOP-13	5/16-24	HOP-14	3/8-16
1 5/16	1 5/8	HOP-16	5/16-18	HOP-17	3/8-16	HOP-18	3/8-24	—	—

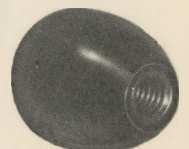
Handles are black molded plastic with brass threaded inserts.



STEEL BALL HANDLES
TYPE HBS



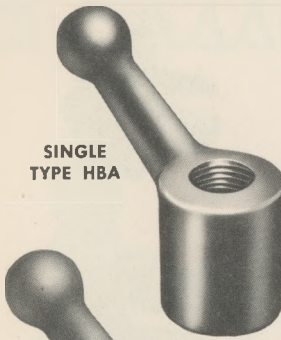
PLASTIC BALL HANDLES
TYPE HBP



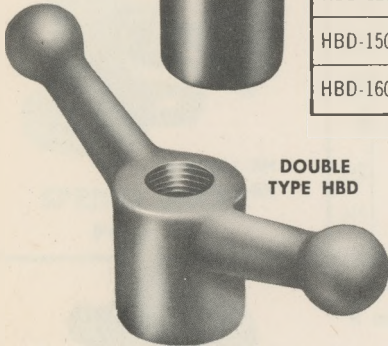
PLASTIC OVAL HANDLES
TYPE HOP

BALL HANDLES

SINGLE
TYPE HBA

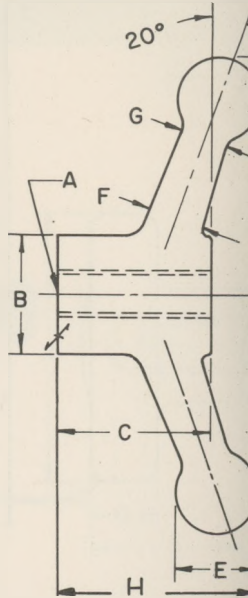


DOUBLE
TYPE HBD



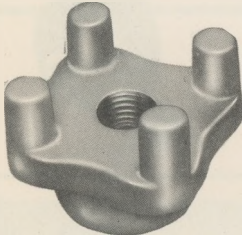
Blank Part No.	TAPPED		REAMED		B	C	D	E	F	G	H
	Part No.	A	Part No.	A							
HBA-130	HBA-131 HBA-132	1/2-13 5/8-11			1 3/8	1 5/8	3	7/8	5/8	7/16	2 5/8
HBA-140	HBA-141 HBA-142	5/8-11 3/4-10			1 5/8	2	4 3/8	1	3/4	1/2	3 1/2
HBD-120	HBD-121	1/2-13	HBD-125	1/2	1 1/8	1 3/8	2 3/8	3/4	1/2	3/8	2
HBD-150	HBD-151	5/8-11	HBD-155	5/8	1 3/8	1 3/8	3	7/8	9/16	7/16	2 1/4
HBD-160	HBD-161	3/4-10	HBD-165	3/4	1 5/8	1 1/2	4	1	5/8	1/2	2 1 1/16

Malleable iron castings, cadmium plated.



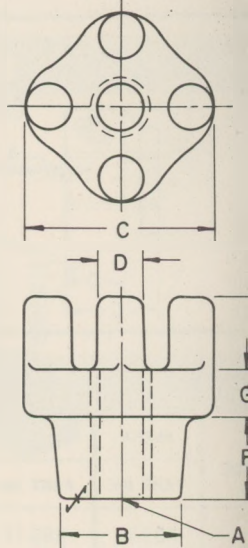
HAND BAR KNOBS

H



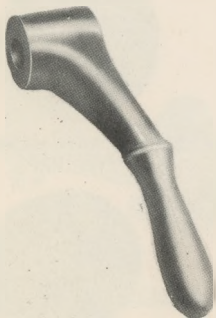
BLANK PART No.	TAPPED		REAMED		B	C	D	E	F	G
	PART No.	A	PART No.	A						
HBK-200	HBK-201	1/2-13	HBK-205	1/2	1 1/4	2	1/2	2 1/8	7/8	1/2
	HBK-202	5/8-11	HBK-206	5/8						
HBK-250	HBK-252	5/8-11	HBK-256	5/8	1 1/2	2 1/2	5/8	2 3/8	1 5/16	9/16
	HBK-253	3/4-10	HBK-257	3/4						
HBK-350	HBK-351	3/4-10	HBK-355	3/4						
	HBK-352	7/8-9	HBK-356	7/8	2 1/8	3 1/2	5/8	2 3/8	1 5/16	9/16
	HBK-353	1"-8	HBK-357	1"						

Malleable iron castings, cadmium plated.



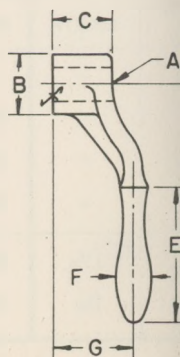
SING

OFFSET HANDLES

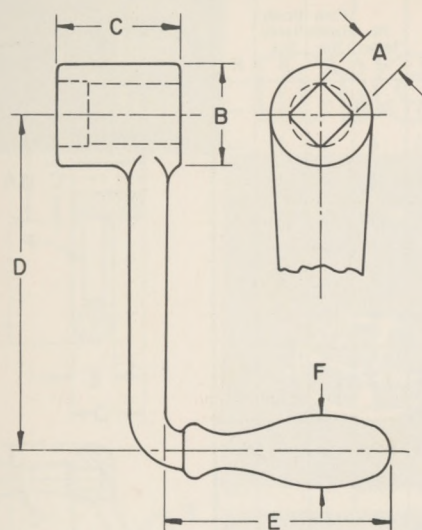


BLANK PART No.	TAPPED		REAMED		B	C	D	E	F	G
	PART No.	A	PART No.	A						
HO-110	HO-112	1/2-13	HO-116	1/2	1 1/8	1 3/16	3 3/8	2 1/4	5/8	1
HO-110	HO-111	5/8-11	HO-115	5/8	1 1/8	1 3/16	3 3/8	2 1/4	5/8	1
HO-120	HO-121	5/8-11	HO-125	5/8	1 1/8	1 1/8	4 1/2	2 5/8	1 1/16	1 1/2
HO-130	HO-131	3/4-10	HO-135	3/4	1 1/4	1 1/4	5	2 7/8	3/4	1 11/16
HO-140	HO-141	7/8-9	HO-145	7/8	1 1/2	1 3/8	5 3/4	3 7/16	1 5/16	1 3/4

Malleable iron, cadmium plated.

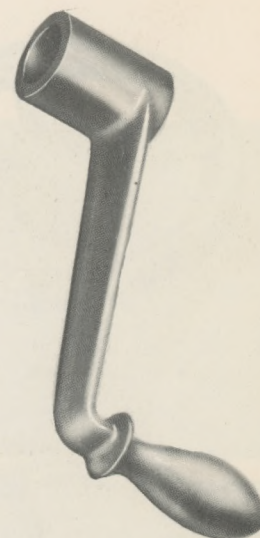


CRANK HANDLES

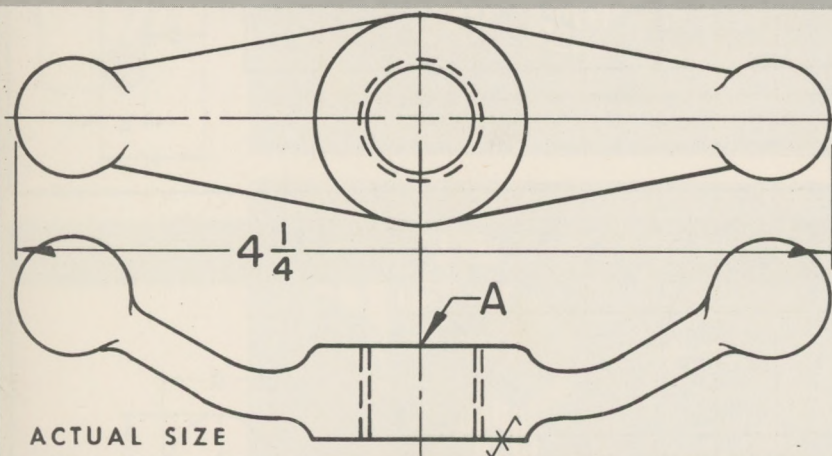


PART No. FINISHED	A	B	C	D	E	F	PART No. BLANK
HC-501	1/2	1	1 1/4	1 3/4	2 3/8	3/4	HC-1
HC-502	1/2	1	1 1/4	2 1/4	2 1/2	3/4	HC-2
HC-503	1/2	1 1/16	1 5/16	3 1/2	2 3/4	7/8	HC-3
HC-564	9/16	1 1/4	1 1/2	3	2 7/8	7/8	HC-4
HC-565	9/16	1 1/4	1 3/8	4	3 3/8	1	HC-5
HC-626	5/8	1 1/4	1 13/16	5	3 3/8	1	HC-6
HC-687	1 1/16	1 1/4	1 15/16	6	3 3/8	1	HC-7
HC-758	3/4	1 3/8	2 1/16	7	3 3/8	1 1/8	HC-8
HC-879	7/8	1 9/16	2 7/16	8	3 5/8	1 1/8	HC-9
HC-880	7/8	1 1/2	2 1/2	9 1/8	3 3/4	1 1/8	HC-10
HC-1011	1	1 3/4	3	10	4	1 1/4	HC-11

Steel forgings, enameled finish.



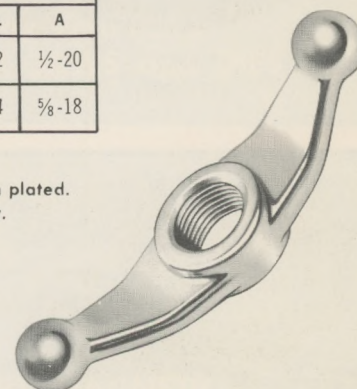
WING NUT HANDLES



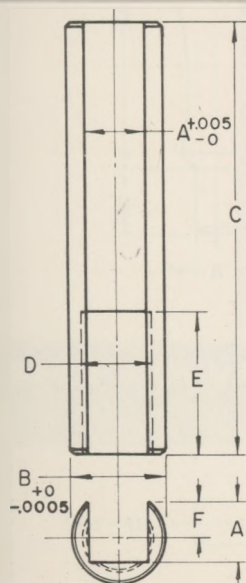
ACTUAL SIZE

BLANK	TAPPED
PART No.	PART No. A
HNW-400	HNW-402 1/2-20
	HNW-404 5/8-18

Steel forgings cadmium plated.
Specials made to order.



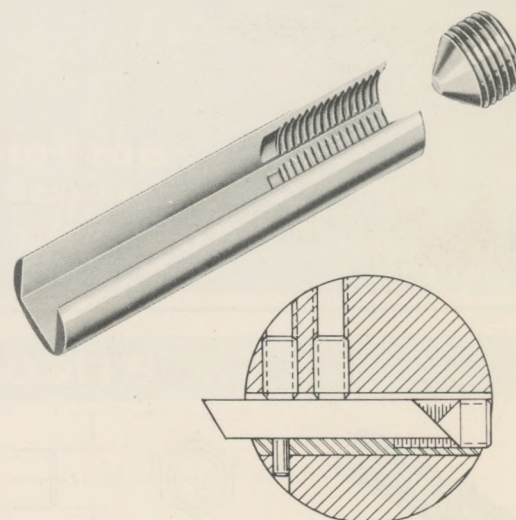
TOOL BIT SLEEVES



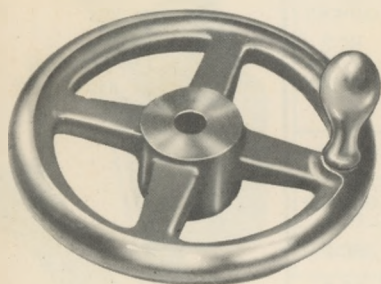
PART No.	A	B	C	D	E	F
SBT-19	3/16	5/16	1 1/2	1/4-28	9/16	.112
SBT-25	1/4	7/16	2	5/16-24	5/8	.167
SBT-31	5/16	1/2	2 1/4	3/8-24	3/4	.174
SBT-37	3/8	19/32	2 1/2	1/2-20	7/8	.225
SBT-43	7/16	11/16	2 5/8	1/2-20	1	.255
SBT-50	1/2	25/32	2 3/4	5/8-18	1	.290
SBT-62	5/8	15/16	3	3/4-16	1	.339
SBT-75	3/4	1 1/8	4	1"-14	1 3/8	.411

Sleeves are soft steel. Cone point socket head screw furnished.
To install ream hole to a slip fit and dowel or braze into place.

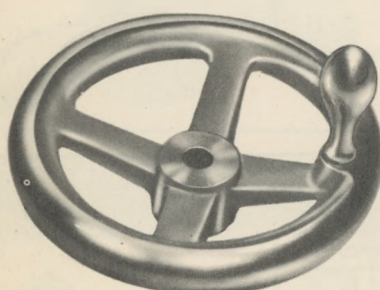
Two sleeves may be used together to form rectangular slot.



HAND WHEELS



STRAIGHT
TYPE HW

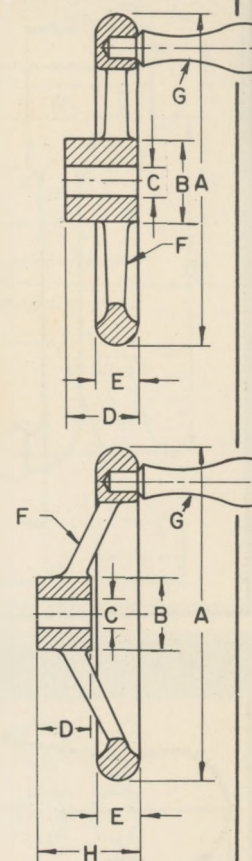


OFFSET
TYPE HWO

BLANK PART No.	FINISHED			A	B	Bore			E	No. Spokes F	Plain Handle Size G	Revol. Handle Size G	H
	No Handle	Plain Handle	Revolving Handle			C	D						
HW- 3	HWF- 3	HWF- 3H	—	3	1	3/8	1 1/16	5/8	Solid	2	—	—	
HW- 4	HWF- 4	HWF- 4H	HWF- 4HR	4	1 1/4	3/8	1 1/8	5/8	4	3	1	—	
HW- 5	HWF- 5	HWF- 5H	HWF- 5HR	5	1 1/2	3/8	1 1/8	5/8	4	4	1	—	
HW- 6	HWF- 6	HWF- 6H	HWF- 6HR	6	1 3/8	1/2	1 1/4	3/4	4	6	2	—	
HW- 7	HWF- 7	HWF- 7H	HWF- 7HR	7	1 3/4	1/2	1 1/4	3/4	4	7	2	—	
HW- 8	HWF- 8	HWF- 8H	HWF- 8HR	8	1 7/8	5/8	1 3/8	7/8	4	8	2	—	
HW-10	HWF-10	HWF-10H	HWF-10HR	10	2 1/4	5/8	2 1/4	1	4	9	3	—	
HW-12	HWF-12	HWF-12H	HWF-12HR	12	3	3/4	3	1 1/4	4	11	4	—	
HWO- 3	HWO- 3	HWO- 3H	—	3	1 3/16	3/8	5/8	5/8	Solid	2	—	1	
HWO- 4	HWO- 4	HWO- 4H	HWO- 4HR	4	1	3/8	7/8	3/4	Solid	3	1	1 1/2	
HWO- 5	HWO- 5	HWO- 5H	HWO- 5HR	5	1 1/4	3/8	7/8	3/4	3	4	1	1 5/8	
HWO- 6	HWO- 6	HWO- 6H	HWO- 6HR	6	1 3/8	1/2	1	7/8	4	6	2	1 7/8	
HWO- 7	HWO- 7	HWO- 7H	HWO- 7HR	7	1 1/2	1/2	1 1/8	7/8	4	7	2	2 1/8	
HWO- 8	HWO- 8	HWO- 8H	HWO- 8HR	8	1 3/4	5/8	1 1/2	1	4	8	2	2 3/8	
HWO-10	HWO-10	HWO-10H	HWO-10HR	10	2 1/4	3/4	1 3/4	1 1/8	5	9	3	2 7/8	
HWO-12	HWO-12	HWO-12H	HWO-12HR	12	2 1/2	3/4	2	1 1/4	5	11	4	3 1/4	

Fine grain cast iron. Finished wheels are polished on the rim. Spokes and hub O.D. are painted. Special size bores or keyways will be furnished to order.

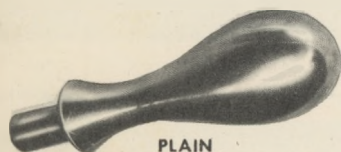
All sizes available in Aluminum. In ordering add suffix "AL" to part number.



MACHINE HANDLES



REVOLVING
TYPE HR

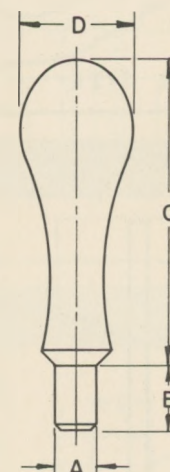


PLAIN
TYPE HP



THREADED
TYPE HT

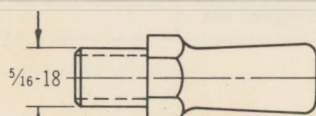
PART No.	A	B	C	D
HR- 1	5/16	9/16	2 1/16	7/8
HR- 2	3/8	3/4	3	1 1/8
HR- 3	7/16	3/4	3 1/4	1 3/16
HR- 4	1/2	1 5/16	4 3/16	1 3/8
HP- 1	1/4	7/16	1 1/4	7/16
HP- 2	1/4	7/16	1 7/16	5/8
HP- 3	5/16	7/16	1 11/16	3/4
HP- 4	5/16	7/16	2	1 3/16
HP- 5	3/8	9/16	2 1/8	7/8
HP- 6	7/16	1 1/16	2 3/8	1
HP- 7	7/16	1 1/16	2 3/4	1 1/8
HP- 8	7/16	1 1/16	3 3/16	1 3/16
HP- 9	7/16	1 3/16	3 7/16	1 3/16
HP-10	1/2	1 5/16	3 5/8	1 1/4
HP-11	1/2	1 5/16	4 1/16	1 3/8
HP-12	5/8	1 3/16	4 9/16	1 1/2
HT- 6	1/2-13	1 5/16	3 5/8	1 1/4
HT- 7	1/2-13	1 5/16	4 1/16	1 3/8
HT- 8	5/8-11	1 3/16	4 9/16	1 1/2



FINGER HANDLES

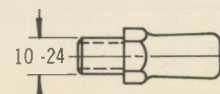


SEE PAGE 16 FOR APPLICATION



HF- 312

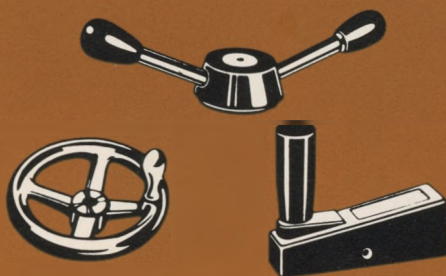
ACTUAL SIZE



HF-192

also
available
from

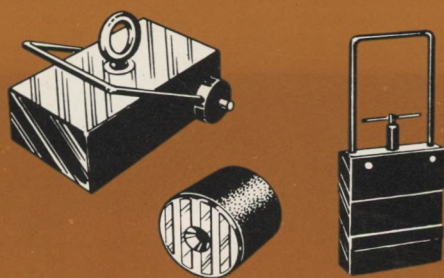
monroe



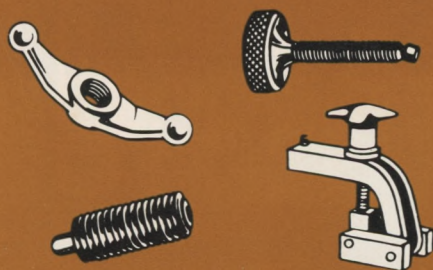
monroe / ELES
PLASTIC
HAND WHEELS
AND HANDLES



monroe / CARB-O-GRIP
Throw-Away GRIPPERS
for CHUCK JAWS and DIES



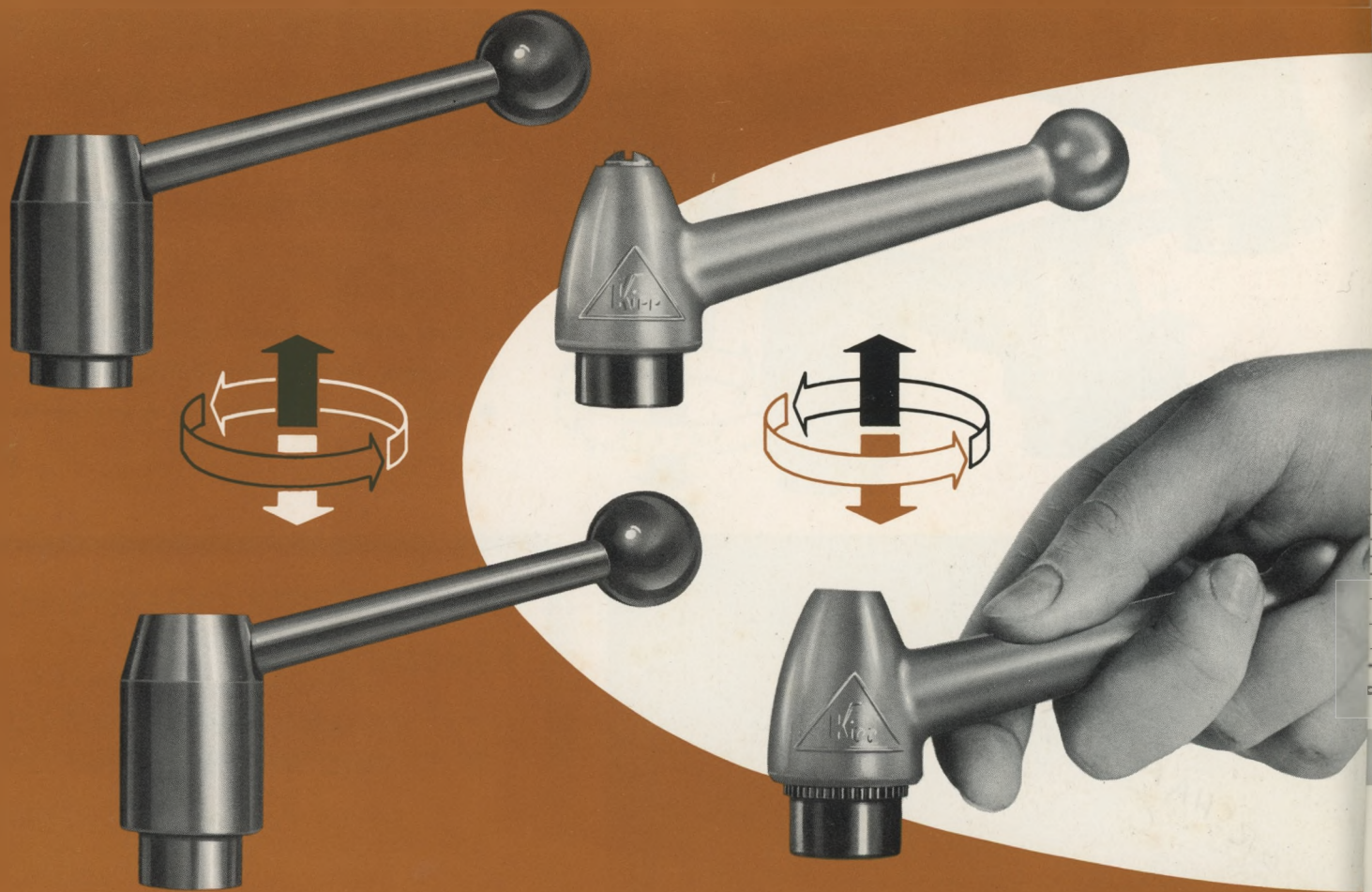
monroe
PERMANENT MAGNETIC
ASSEMBLIES



monroe
MACHINE AND TOOLING
COMPONENTS

monroe Engineering Products, Inc. • 14830 Fenkell • Detroit, Mich. 48227

distributed by:



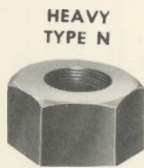
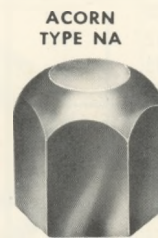
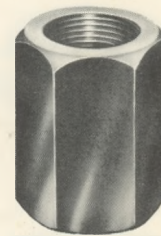
monroe/KIPP

adjustable handles

monroe Engineering Products, Inc.
14830 Fenkell Avenue
Detroit, Michigan 48227
Area Code 313/272-3288

HEXAGON NUTS

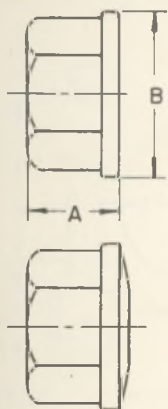
CYANIDE HARDENED—BLACK OXIDE FINISH

HEAVY
TYPE NEXTRA HEAVY
TYPE NHJAM
TYPE NJACORN
TYPE NAEXTENSION
TYPE NE

THREAD SIZE	ACROSS FLATS	HEAVY		EXTRA HEAVY		JAM		ACORN*			EXTENSION	
		PART No.	THICKNESS	PART No.	THICKNESS	PART No.	THICKNESS	PART No.	HEIGHT	THREAD DEPTH	PART No.	LENGTH
1/4-20	1/2	N- 250	15/64	—	—	NJ- 250	11/64	—	—	—	—	—
5/16-18	19/32	N- 312	19/64	—	—	NJ- 312	13/64	—	—	—	—	—
3/8-16	11/16	N- 375	23/64	NH-375	1/2	NJ- 375	17/64	NA-375	3/4	9/16	NE- 375	1
1/2-13	7/8	N- 500	31/64	NH-500	5/8	NJ- 500	19/64	NA-500	15/16	3/4	NE- 500	1 1/2
3/8-11	1 1/16	N- 625	39/64	NH-625	13/16	NJ- 625	23/64	NA-625	13/16	15/16	NE- 625	1 3/4
3/4-10	1 1/4	N- 750	47/64	NH-750	1"	NJ- 750	27/64	NA-750	1 3/8	1 1/8	NE- 750	2
7/8- 9	1 7/16	N- 875	55/64	—	—	NJ- 875	31/64	—	—	—	—	—
1" - 8	1 5/8	N-1000	63/64	—	—	NJ-1000	35/64	—	—	—	—	—

*Acorn nuts are bottom tapped giving full thread depth as specified.

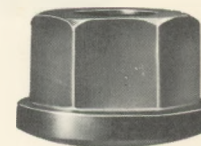
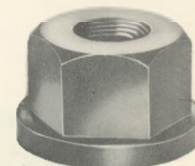
COLLAR NUTS



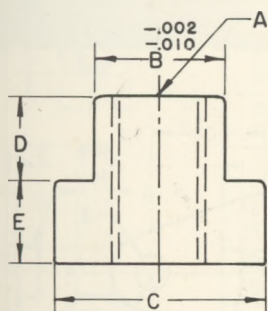
FLAT FACE				SPHERICAL FACE		A	B	ACROSS FLATS
PART No.	THREAD	PART No.	THREAD	PART No.	THREAD			
NC- 250	1/4-20	NC- 250F	1/4-28	NS- 250	1/4-20	5/16	5/8	1/2
NC- 375	3/8-16	NC- 375F	3/8-24	NS- 375	3/8-16	1/2	3/4	11/16
NC- 500	1/2-13	NC- 500F	1/2-20	NS- 500	1/2-13	11/16	1 1/8	7/8
NC- 625	5/8-11	NC- 625F	5/8-18	NS- 625	5/8-11	13/16	1 3/8	1 1/16
NC- 750	3/4-10	NC- 750F	3/4-16	NS- 750	3/4-10	1	1 5/8	1 1/4
NC- 875	7/8- 9	NC- 875F	7/8-14	NS- 875	7/8- 9	1 1/8	1 3/4	1 7/16
NC-1000	1" - 8	NC-1000F	1" -14	NS-1000	1" - 8	1 1/4	2	1 5/8

Type NS nuts are used with bottom half of spherical washers shown on page 6.

Cyanide hardened. Black Oxide finish.



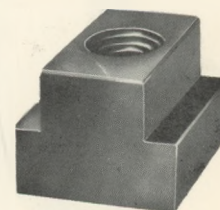
TEE SLOT NUTS



PART No.	A	B	C	D	E	LENGTH
NT- 312	5/16-18	7/16	11/16	3/8	1/4	7/8
NT- 375	3/8-16	7/16	11/16	3/8	1/4	7/8
NT- 376	3/8-16	1/2	7/8	3/8	1/4	7/8
NT- 377	3/8-16	9/16	7/8	13/32	11/32	1 1/4
NT- 500	1/2-13	9/16	7/8	13/32	11/32	1 1/4
NT- 501	1/2-13	5/8	1 1/8	25/64	23/64	1 1/4
NT- 502	1/2-13	11/16	1 1/8	7/16	7/16	1 1/2
NT- 625	5/8-11	11/16	1 1/8	7/16	7/16	1 1/2
NT- 626	5/8-11	3/4	1 1/4	17/32	15/32	1 1/2
NT- 627	5/8-11	13/16	1 1/4	9/16	9/16	1 3/4
NT- 750	3/4-10	13/16	1 5/8	9/16	9/16	1 3/4
NT- 751	3/4-10	7/8	1 1/2	7/16	9/16	1 3/4
NT- 752	3/4-10	1	1 11/16	9/16	1 1/16	1 3/4

Cyanide hardened. Black Oxide finish.

T nuts are designed to provide stud engagement of 1 1/2 times the diameter.

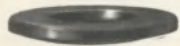


< < < m o n r o e > > >

PLAIN and SPHERICAL WASHERS



HEAVY
PLAIN WASHERS
TYPE W



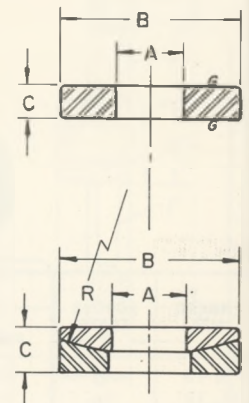
SPHERICAL WASHERS
TYPE WS

PLAIN WASHERS			
PART No.	A	B	C
W- 250	$\frac{17}{64}$	$\frac{5}{8}$	$\frac{1}{8}$
W- 312	$\frac{11}{32}$	$\frac{3}{4}$	$\frac{1}{8}$
W- 375	$\frac{13}{32}$	$\frac{1}{2}$	$\frac{1}{8}$
W- 376		1	$\frac{3}{16}$
W- 500	$\frac{17}{32}$	$\frac{11}{16}$	$\frac{1}{8}$
W- 501		$\frac{1}{4}$	$\frac{3}{16}$
W- 502		$\frac{13}{16}$	$\frac{3}{8}$
W- 625	$\frac{21}{32}$	$\frac{1}{4}$	$\frac{1}{8}$
W- 626		$\frac{1}{2}$	$\frac{1}{4}$
W- 750	$\frac{25}{32}$	$\frac{1}{2}$	$\frac{5}{32}$
W- 751		$\frac{15}{8}$	$\frac{1}{4}$
W-1000	$\frac{11}{32}$	2	$\frac{3}{16}$

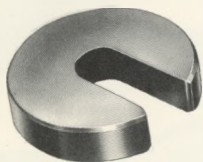
HEAVY PLAIN SETUP WASHERS Stampings, cyanide hardened, unground.			
PART No.	A	B	C
WP-375	$\frac{13}{32}$	1	$\frac{3}{16}$
WP-500	$\frac{17}{32}$	$\frac{13}{8}$	$\frac{1}{4}$
WP-625	$\frac{21}{32}$	$\frac{15}{8}$	$\frac{1}{4}$
WP-750	$\frac{25}{32}$	$\frac{13}{4}$	$\frac{5}{16}$

SPHERICAL WASHERS				
PART No.	A	B	C	R
WS- 250	$\frac{9}{32}$	$\frac{5}{8}$	$\frac{3}{16}$	$\frac{3}{4}$
WS- 312	$\frac{11}{32}$	$\frac{7}{8}$	$\frac{1}{4}$	1
WS- 375	$\frac{13}{32}$	1	$\frac{1}{4}$	$1\frac{1}{2}$
WS- 500	$\frac{17}{32}$	$\frac{13}{16}$	$\frac{5}{16}$	$1\frac{3}{4}$
WS- 625	$\frac{21}{32}$	$\frac{13}{8}$	$\frac{5}{16}$	$1\frac{3}{4}$
WS- 750	$\frac{25}{32}$	$\frac{15}{8}$	$\frac{3}{8}$	$2\frac{1}{4}$
WS- 875	$\frac{15}{16}$	$\frac{1}{8}$	$\frac{3}{8}$	$2\frac{1}{2}$
WS-1000	$\frac{17}{16}$	2	$\frac{1}{2}$	$2\frac{3}{4}$
WS-1125	$\frac{13}{16}$	$2\frac{1}{4}$	$\frac{1}{2}$	3
WS-1250	$\frac{15}{16}$	$2\frac{5}{8}$	$\frac{1}{2}$	3
WS-1500	$\frac{19}{16}$	$2\frac{7}{8}$	$\frac{1}{2}$	3

Type W & WS Washers are carburized and hardened. Bottom or top half of WS washers may be purchased separately.

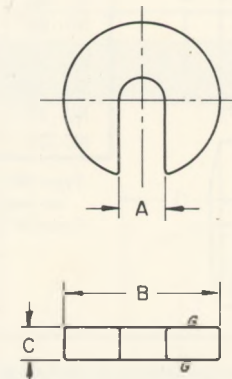


"C" WASHERS

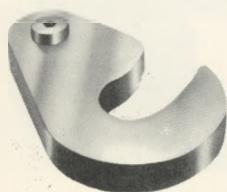


PART No.	A	B	C
WC-250	$\frac{9}{32}$	$\frac{3}{4}$	$\frac{1}{4}$
WC-251		1	
WC-252		$1\frac{1}{4}$	
WC-253		$1\frac{1}{2}$	
WC-313	$\frac{11}{32}$	$1\frac{1}{4}$	$\frac{5}{16}$
WC-375	$\frac{13}{32}$	$1\frac{1}{4}$	$\frac{3}{8}$
WC-376		$1\frac{1}{2}$	
WC-377		$1\frac{3}{4}$	
WC-378		2	
WC-379		$2\frac{1}{4}$	
WC-501	$\frac{17}{32}$	$1\frac{7}{8}$	$\frac{3}{8}$
WC-503		$2\frac{1}{2}$	$\frac{1}{2}$
WC-625	$\frac{21}{32}$	$2\frac{1}{8}$	$\frac{3}{8}$
WC-751	$\frac{25}{32}$	$2\frac{1}{2}$	$\frac{7}{16}$
WC-876	$\frac{29}{32}$	$2\frac{1}{2}$	$\frac{1}{2}$

Washers are carburized, hardened and ground and have Black Oxide finish.

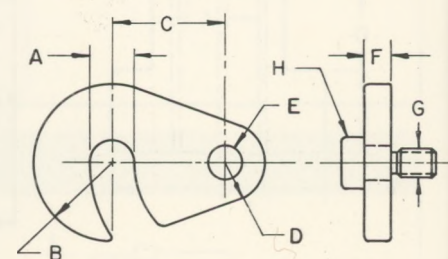


SWINGING "C" WASHERS



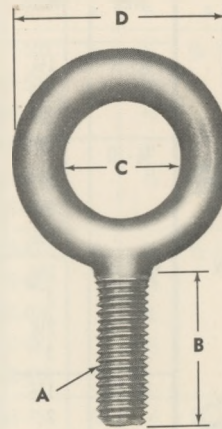
PART No.	A	B	C	D	E	F	G	H PART No.
WCS-190	$\frac{13}{64}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	10-24	SS-251
WCS-250	$\frac{9}{32}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{16}$	10-24	SS-250
WCS-312	$\frac{11}{32}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{3}{16}$	$\frac{5}{16}$	$\frac{1}{4}$	$\frac{1}{4}$ -20	SS-311
WCS-375	$\frac{13}{32}$	$\frac{3}{4}$	1	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{5}{16}$ -18	SS-371
WCS-500	$\frac{17}{32}$	$\frac{7}{8}$	$1\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{5}{16}$	$\frac{5}{16}$ -18	SS-372
WCS-625	$\frac{21}{32}$	1	$1\frac{1}{2}$	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$ -16	SS-503
WCS-750	$\frac{25}{32}$	$1\frac{1}{4}$	$1\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{8}$ -16	SS-504

All washers are carburized, hardened and ground flat and parallel. Shoulder screw is furnished with each washer. Black Oxide finish.

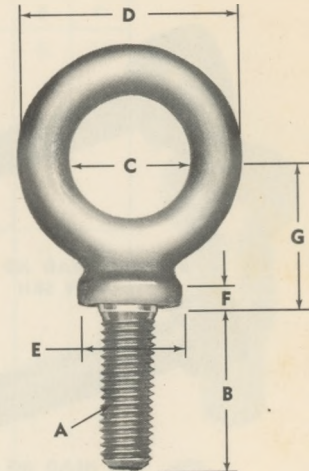


FORGED EYE BOLTS

PART No.		A	B	C	D	E	F	G	Min. Break. Strng. (lbs.)	Safe Work. Load (lbs.)
Plain	Shoulder									
BEP-250	BES-250	1/4-20	1	3/4	1 1/16	1/2	3/16	1 1/16	2,200	550
BEP-375	BES-375	3/8-16	1 1/4	1	1 1/2	1 1/16	3/16	1 1/16	5,400	1,300
BEP-500	BES-500	1/2-13	1 1/2	1 1/16	2 1/16	7/8	1/4	1 1/16	9,800	2,400
BEP-625	BES-625	5/8-11	1 3/4	1 3/8	2 1/2	1 1/8	1/4	1 1/16	15,700	3,900
BEP-750	BES-750	3/4-10	2	1 1/2	2 1/16	1 1/4	5/16	1 7/8	23,000	5,700

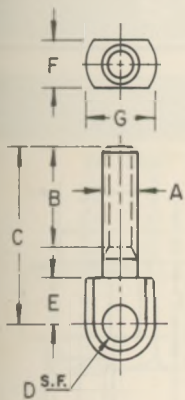


PLAIN
TYPE BEP



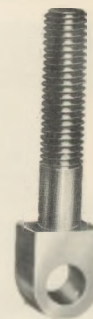
SHOULDER
TYPE BES

LATCH BOLTS

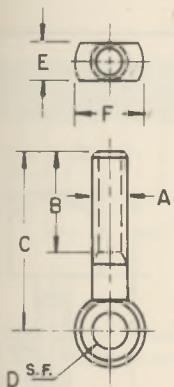


PART No.		A	B	C	D	E	F	G
Hardened	Soft							
BL-250	BL-250-S	1/4-20	3/4	1 1/2	1/4	5/16	5/16	1/2
BL-251	BL-251-S		1	2				
BL-252	BL-252-S		1 1/4	2 1/2				
BL-313	BL-313-S	5/16-18	1	2	5/16	3/8	3/8	5/8
BL-314	BL-314-S		1 3/8	3				
BL-375	BL-375-S	3/8-16	1 1/16	1 7/8	3/8	1/2	1/2	3/4
BL-376	BL-376-S		1 3/8	2 1/2				
BL-377	BL-377-S		2	3 1/2				
BL-500	BL-500-S	1/2-13	1 1/4	2 3/8	1/2	5/8	5/8	1
BL-501	BL-501-S		1 3/4	3 3/8				
BL-502	BL-502-S		2 1/4	4 1/8				
BL-626	BL-626-S	5/8-11	1 3/4	3 1/2	5/8	3/4	3/4	1 1/4
BL-627	BL-627-S		2 1/2	4 3/4				
BL-750	BL-750-S	3/4-10	1 3/4	3 1/8	3/4	7/8	7/8	1 1/2
BL-751	BL-751-S		2	4 1/2				
BL-752	BL-752-S		3	6				

Cyanide-hardened Black Oxide finish.

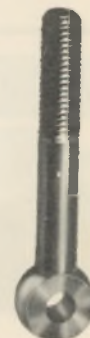


EYE BOLTS

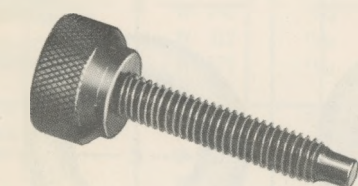


PART No.		A	B	C	D	E	F
Hardened	Soft						
BE-250	BE-250-S	1/4-20	3/4	2	3/16	1/4	1/2
BE-252	BE-252-S		1 1/4	3			
BE-313	BE-313-S	5/16-18	1 1/2	3	5/16	5/16	5/8
BE-315	BE-315-S		2	4			
BE-375	BE-375-S	3/8-16	1 1/2	3	5/16	3/8	3/4
BE-376	BE-376-S		1 1/2	3	3/8		
BE-377	BE-377-S		2	3 3/4	5/16		
BE-378	BE-378-S		2	3 3/4	3/8		
BE-500	BE-500-S	1/2-13	1 1/2	3 3/4	3/8	1/2	1
BE-502	BE-502-S		2	5			
BE-625	BE-625-S	5/8-11	2	4 1/2	5/8	5/8	1 1/4
BE-626	BE-626-S		2 1/2	6			
BE-750	BE-750-S	3/4-10	2	4 1/2	3/4	3/4	1 1/2
BE-751	BE-751-S		3	6			

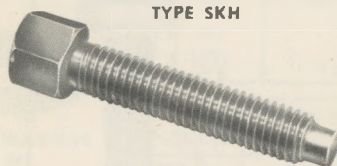
Cyanide hardened. Black Oxide finish.



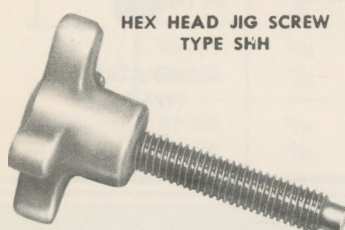
JIG SCREWS



KNURLED HEAD JIG SCREW
TYPE SKH



HEX HEAD JIG SCREW
TYPE SHH

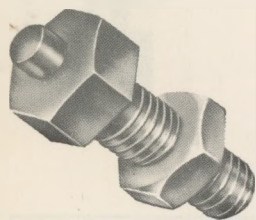


HAND KNOB JIG SCREW
TYPE SHK

THREAD SIZE	LENGTH UNDER HEAD	KNURLED HEAD TYPE			HEX. HEAD TYPE			HAND KNOB TYPE	
		PART No.	HEAD DIA.	HEAD THICKNESS	PART No.	HEX.	HEX. THICKNESS	PART No.	HAND KNOB USED
10-24	1 1/4 1 5/8 2	SKH-190 SKH-191 SKH-192	5/8	5/16					
1/4-20	1 1 1/2 2 2 1/2	SKH-250 SKH-251 SKH-252 SKH-253	3/4	1/2	SHH-250 SHH-251 SHH-252 SHH-253	7/16	1/4	SHK-250 SHK-251 SHK-252 SHK-253	HK-116
5/16-18	1 1/2 2 2 1/2 3	SKH-313 SKH-313x SKH-314 SKH-315	3/4	1/2	SHH-313 SHH-313x SHH-314 SHH-315	1/2	5/16	SHK-313 SHK-313x SHK-314 SHK-315	HK-155
3/8-16	1 1/2 2 2 1/2 3	SKH-375 SKH-376 SKH-377 SKH-378	1	5/8	SHH-375 SHH-376 SHH-377 SHH-378	9/16	3/8	SHK-375 SHK-376 SHK-377 SHK-378	HK-206
1/2-13	1 1/2 2 2 1/2 3 3 1/2	SKH-500 SKH-501 SKH-503 SKH-504 SKH-505	1 1/4	3/4	SHH-501 SHH-502 SHH-503 SHH-504 SHH-505	1 1/16	1/2	SHK-500 SHK-501 SHK-502 SHK-503 SHK-504	HK-256
5/8-11	1 3/4 2 1/2 3 3 1/2	— — — —	— — — —	— — — —	SHH-625 SHH-626 SHH-627 SHH-628	7/8	5/8	SHK-625 SHK-626 SHK-627 SHK-628	HK-305

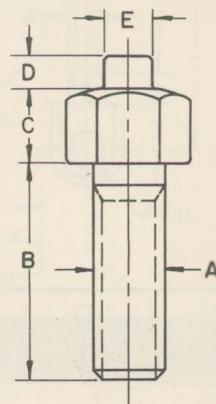
Screws are cyanide-hardened and Black Oxide finished. Screw point is full dog.

CLAMP REST SCREWS

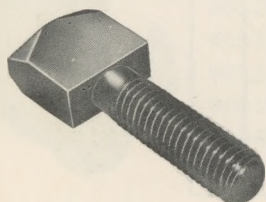


PART No.	A	B	C	D	E	HEX.
SR-250 SR-251	1/4-20	7/8 1 1/8	1/4	1/8	1 1/64	7/16
SR-375 SR-376	3/8-16	1 1/8 1 5/8	3/8	7/32	1 1/32	9/16
SR-500 SR-501	1/2-13	1 1/8 2 1/2	1/2	1/4	1 1/32	1 1/16
SR-625 SR-626	5/8-11	1 3/4 3	5/8	1/4	1 5/32	7/8
SR-750 SR-751	3/4-10	1 7/8 3	5/8	1/4	1 5/32	1 1/16

Screws are cyanide-hardened and Black Oxide finished. Jam nut furnished.

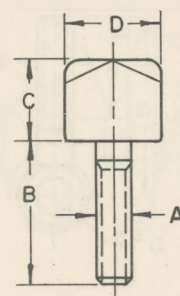


QUARTER TURN SCREWS



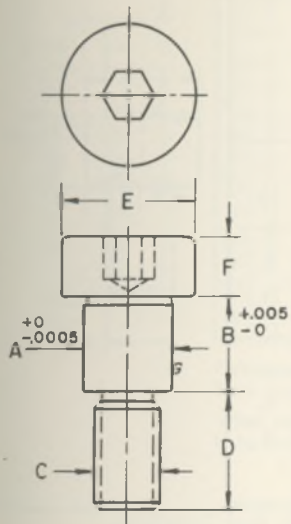
PART No.		A	B	C	D	HEAD THICKNESS
Soft	Hardened					
SQ-190	SQ-190 H	10-32	1 1/4	3/4	3/4	3/16
SQ-250	SQ-250 H	1/4-20	1 1/4	3/4	3/4	1/4
SQ-312 SQ-313	SQ-312 H SQ-313 H	5/16-18	1 1/2 2	1	1	5/16
SQ-375 SQ-376	SQ-375 H SQ-376 H	3/8-16	1 1/2 2	1	1	3/8
SQ-500	SQ-500 H	1/2-13	1 3/4	7/8	1 1/4	1/2

All screws are Black Oxide finished.



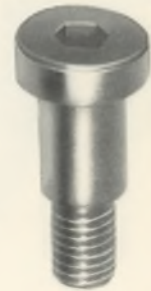
Flat head so
.030 deep, h
Oxide finish.

SHOULDER SCREWS



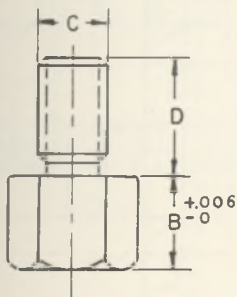
PART No.	BODY		THREAD		HEAD	
	A	B	C	D	E	F
SS-251	1/4	1/4	10-24	3/8	3/8	3/16
SS-252		5/16				
SS-253		3/8				
SS-254		1/2				
SS-255		5/8				
SS-256		3/4				
SS-311	5/16	1/4	1/4-20	7/16	7/16	7/32
SS-312		5/16				
SS-313		3/8				
SS-314		1/2				
SS-315		5/8				
SS-316		3/4				
SS-371	3/8	1/4	5/16-18	1/2	9/16	1/4
SS-372		5/16				
SS-373		3/8				
SS-374		1/2				
SS-375		5/8				
SS-376		3/4				

PART No.	BODY		THREAD		HEAD	
	A	B	C	D	E	F
SS-503	1/2	3/8	3/8-16	5/8	3/4	5/16
SS-504		1/2				
SS-505		5/8				
SS-506		3/4				
SS-507		7/8				
SS-508		1				
SS-624	5/8	1/2	1/2-13	3/4	7/8	3/8
SS-625		5/8				
SS-626		3/4				
SS-627		7/8				
SS-628		1				
SS-754	3/4	1/2	5/8-11	7/8	1	1/2
SS-755		5/8				
SS-756		3/4				
SS-757		7/8				
SS-758		1				

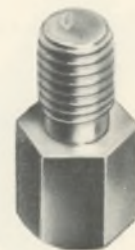


Alloy steel heat treated to Rockwell C-30-34. Tensile strength 140,000 P.S.I. Precision ground to close tolerances. Black Oxide finish.

STUD TYPE JIG FEET BUTTONS

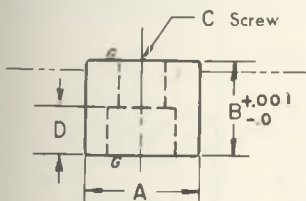


PART No.	HEX.	B	C	D
BSF-253	3/8	1/4	1/4-20	3/8
BSF-254		3/8		
BSF-255		1/2		
BSF-256		3/4		
BSF-372	1/2	1/4	3/8-16	1/2
BSF-373		3/8		
BSF-374		1/2		
BSF-503	5/8	1/4	1/2-13	5/8
BSF-504		3/8		
BSF-505		1/2		
BSF-506	5/8	5/8	1/2-13	5/8
BSF-507		3/4		
BSF-508		1		



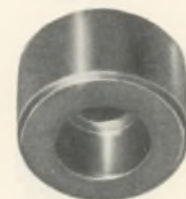
Carburized and hardened .030 deep. Black Oxide finish.

JIG FEET BUTTONS

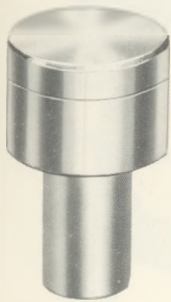


Flat head screws furnished. Carburized .030 deep, hardened and ground. Black Oxide finish.

PART No.	A	B	C	D
BJF-425	3/8	1/4	#5	C'Sink
BJF-437		3/8		Flat Hd.
BJF-450		1/2		Screw
BJF-626	5/8	1/4	#10	Furnished
BJF-637	5/8	3/8	1/4	5/32
BJF-650		1/2		
BJF-662		5/8		
BJF-675		3/4		
BJF-6100		1		
BJF-850	7/8	1/2	5/16	1 1/32
BJF-862		5/8		
BJF-875		3/4		
BJF-8100		1		
BJF-8112		1 1/8		
BJF-8125		1 1/4		
BJF-13075	1 3/8	3/4	1/2	1 7/32
BJF-13100		1		
BJF-13150		1 1/2		

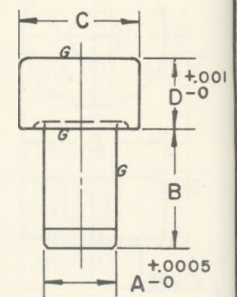


REST BUTTONS



PART No.	A	B	C	D
BR- 182	.188	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{4}$
BR- 183				$\frac{3}{8}$
BR- 185				$\frac{1}{2}$
*BR- 252	.2505	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4}$
*BR- 253				$\frac{3}{8}$
*BR- 255				$\frac{1}{2}$
BR-312	.3135	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4}$
BR-313				$\frac{3}{8}$
BR-314				$\frac{1}{2}$
*BR- 372	.3755	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{4}$
*BR- 373				$\frac{3}{8}$
BR- 374				$\frac{7}{16}$
*BR- 375				$\frac{1}{2}$
BR- 376				$\frac{5}{8}$
*BR- 377				$\frac{3}{4}$

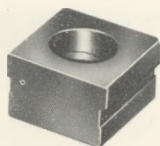
PART No.	A	B	C	D
*BR- 503	.5005	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{3}{8}$
BR- 504				$\frac{7}{16}$
*BR- 505				$\frac{1}{2}$
BR- 506				$\frac{5}{8}$
*BR- 507				$\frac{3}{4}$
*BR- 623	.6255	$\frac{3}{4}$	1	$\frac{3}{8}$
BR- 624				$\frac{7}{16}$
*BR- 625				$\frac{1}{2}$
BR- 626				$\frac{5}{8}$
*BR- 627				$\frac{3}{4}$
*BR- 753	.751	$\frac{7}{8}$	$1\frac{1}{4}$	$\frac{3}{8}$
*BR- 755				$\frac{1}{2}$
BR- 756				$\frac{5}{8}$
*BR- 757				$\frac{3}{4}$
BR- 758				1



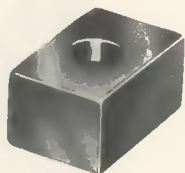
Carburized .030 deep, hardened and ground. Lead diameter is ground on stem to aid in assembly. Black Oxide finish.

*These sizes also available in Tool Steel hardened to Rockwell C-57-60. In ordering add suffix "TS" to part number.

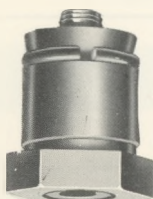
FIXTURE KEYS



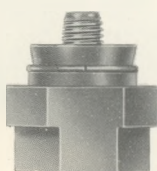
STEPPED TYPE KS



PLAIN TYPE K



REAMED HOLE KEY
TYPE KR



HEX KEY
TYPE KH

Part No.	A	B	C	D	Screw Size E
KS-6250	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{4}$
KS-7562	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{5}{16}$
KS-8168	$1\frac{1}{16}$	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{1}{2}$	$\frac{5}{16}$
K-500	$\frac{1}{2}$		$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$
K-562	$\frac{9}{16}$		$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$
K-625	$\frac{5}{8}$		$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$
K-687	$1\frac{1}{16}$		1	$\frac{1}{2}$	$\frac{1}{4}$
K-750	$\frac{3}{4}$		$1\frac{1}{4}$	$\frac{5}{8}$	$\frac{5}{16}$
K-812	$1\frac{3}{16}$		$1\frac{1}{4}$	$\frac{5}{8}$	$\frac{5}{16}$

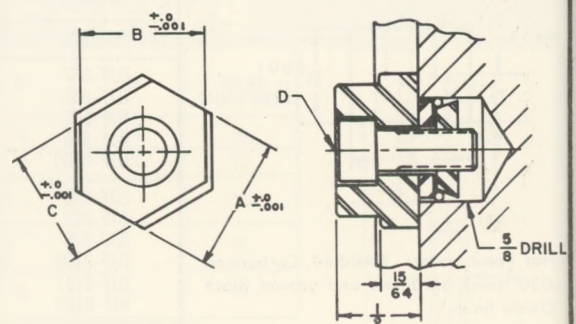
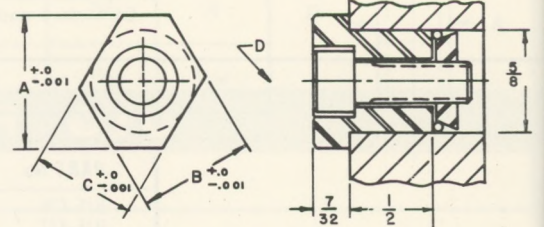
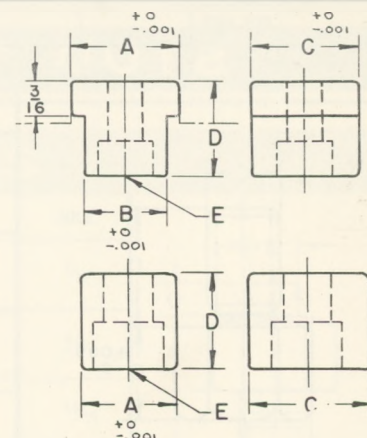
Black Oxide finished. Keys hardened and ground to size.

PART No.	A	B	C	D
KR-866	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{4}$
KR-860	Rect.	$1\frac{3}{16}$	$1\frac{1}{16}$	$\frac{1}{4}$
KR-750	Sq.	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{4}$

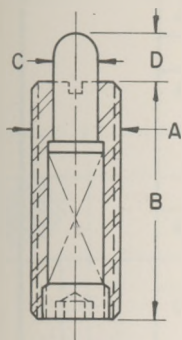
Black Oxide finished. Keys soft. Flats concentric to O.D. within .002 T.I.R.

Part No.	Fixture Keyway Size	A	B	C	D
KH-653	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{9}{16}$	$\frac{3}{8}$	#8
KH-655	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{1}{4}$
KH-665	$1\frac{1}{16}$	$1\frac{1}{16}$	$1\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{4}$
KH-766	$\frac{3}{4}$	$\frac{3}{4}$	$1\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{4}$
KH-866	$1\frac{3}{16}$	$1\frac{3}{16}$	$1\frac{1}{16}$	$\frac{5}{8}$	$\frac{1}{4}$
KH-876	$1\frac{1}{16}$	$1\frac{3}{16}$	$\frac{3}{4}$	$1\frac{1}{16}$	$\frac{1}{4}$

Black Oxide finished. Keys soft. Flats concentric within .002 T.I.R.



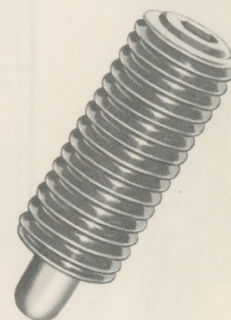
SPRING PLUNGERS



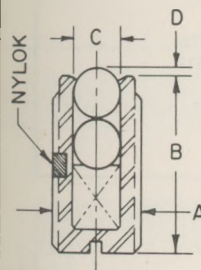
HEAVY PRESSURE			LIGHT PRESSURE			A	B	+.001	
Standard	With Nylok	Press.	Standard	With Nylok	Press.			C	D
PS-6	PSN-6	3	PSL-6	PSLN-6	1	6-32	1/2	.045	1/16
PS-6A	PSN-6A	3	PSL-6A	PSLN-6A	1	6-32	3/8	.045	1/16
PS-8	PSN-8	5	PSL-8	PSLN-8	1 1/2	8-32	5/8	.079	3/32
PS-10	PSN-10	7	PSL-10	PSLN-10	2	10-32	3/4	.092	1/8
PS-25	PSN-25	8	PSL-25	PSLN-25	2 1/2	1/4-20	1	.118	3/16
PS-26	PSN-26	6	PSL-26	PSLN-26	1	1/4-20	3/4	.118	3/16
PS-27	PSN-27	8	PSL-27	PSLN-27	2 1/2	1/4-28	1	.118	3/16
PS-31	PSN-31	9	PSL-31	PSLN-31	3	5/16-18	1	.134	3/16
PS-37	PSN-37	10	PSL-37	PSLN-37	5	3/8-16	1 1/8	.185	3/16
PS-50	PSN-50	12	PSL-50	PSLN-50	6	1/2-13	1 1/4	.247	1/4
PS-62	PSN-62	18	PSL-62	PSLN-62	7	3/8-11	1 1/2	.309	3/16
PS-75	PSN-75	22	PSL-75	PSLN-75	11	3/4-10	1 3/4	.373	3/16
PS-100	PSN-100	42	PSL-100	PSLN-100	18	1-8	2 1/4	.498	1/2

Nylon pins available by adding suffix "N" to part number except in sizes 6, 6A, 75 and 100. Black Oxide finish.

When using "Nylok" it is recommended that the mating tapped hole be countersunk 90°-100° to 1/2 larger than the major diameter.

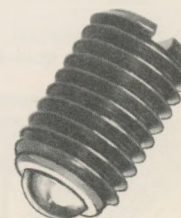


BALL NOSE SPRING PLUNGERS

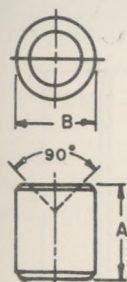


PART NUMBER*		PRESSURE		A	B	C	D
Standard	With Nylok	Min.	Max.				
PB-40	PBN-40	1/8	1/2	4-48	3/16	.062	.020
PB-50	PBN-50	1/4	3/4	5-40	1/4	.062	.020
PB-60	PBN-60	1/2	1	6-40	5/16	.078	.023
PB-80	PBN-80	1/2	1 1/4	8-36	1 1/32	.093	.025
PB-100	PBN-100	1/2	1 1/2	10-32	3 3/64	.093	.025
PB-101	PBN-101	1 1/2	3				
PB-102	PBN-102	2	5				
PB-250	PBN-250	2	4	1/4-20	1 1/32	.125	.035
PB-251	PBN-251	3	7				
PB-252	PBN-252	4	12				
PB-312	PBN-312	2	4	5/16-18	1 1/32	5/32	.040
PB-313	PBN-313	4	8				
PB-314	PBN-314	6	12				
PB-375	PBN-375	3	5	3/8-16	1 1/16	3/16	.047
PB-376	PBN-376	6	10				
PB-377	PBN-377	7	21				
PB-500	PBN-500	3	6	1/2-13	3/4	9/32	.071
PB-501	PBN-501	6	12				
PB-502	PBN-502	8	30				
PB-625	PBN-625	5	9	5/8-11	1	1/16	.080
PB-626	PBN-626	9	18				
PB-627	PBN-627	8	50				

* Part No. PB-40 thru PB-80 are stainless steel.



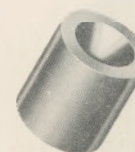
BALL DETENTS



PART NUMBER	FOR BALL NOSE PLUNGER	A	B +.0002 -0
PBD-40	4-48 and 5-40	1/8	.1075
PBD-60	6-40	1/8	.1175
PBD-80	8-36 and 10-32	3/16	.1614
PBD-250	1/4-20	1/4	.2034
PBD-312	5/16-18	5/16	.2659
PBD-375	3/8-16	3/8	.3284
PBD-500	1/2-13	1/2	.4378
PBD-625	5/8-11	5/8	.5472

Hardened and ground.

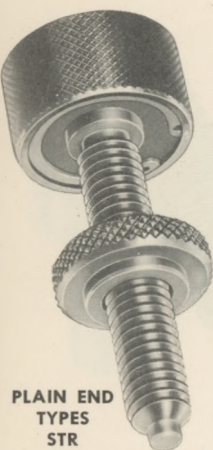
For use with ball nose plungers.



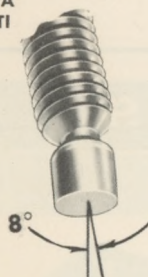
TORQUE SCREWS

Thread Size	Length Under Head	Head Dia.	REGULAR			ADJUSTABLE			INVERTED			
			PART No.	A	End Press.	Part No.	A	End Press.	Part No.	A	B	End Press.
10-24	1 1/4	7/8	STR-190	1/2	10-12							
1/4-20	1 1/4 2	7/8	STR-250 STR-251	1/2	12-14				STI-250	1/2	1/2	12-14
5/16-18	1 3/4 2 1/4 3	7/8	STR-312 STR-313 STR-315	1/2	14-16							
3/8-16	1 3/4 2 1/4 3	1 1/8	STR-375 STR-376 STR-378	5/16	16-18	STA-375 -376 -378	3/4	0-50	STI-375	5/16	1 1/2	16-18
1/2-13	1 3/4 2 1/4 2 3/4 3 3 1/2	1 1/8	STR-500 STR-501 STR-502 STR-503 STR-504	5/16	18-20	STA-500 -501 -502 -503 -504	3/4	0-50	STI-500	5/16	1 1/2	18-20
5/8-11	1 3/4 3	1 1/8	STR-625 STR-628	5/16	20-22				STI-600	5/16	1 1/2	20-22
1/4-20 5/16-18 3/8-16 1/2-13	2 1/4 2 1/4 2 1/4 3	7/8 7/8 1 1/4 1 1/8	STRS-250 STRS-312 STRS-375 STRS-500	1/2 1/2 5/16 5/16	12-14 14-16 16-18 18-20	STAS-375 STAS-500	3/4 3/4	0-50 0-50				

BLACK OXIDE FINISH



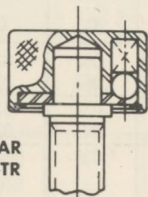
PLAIN END
TYPES
STR
STA
STI



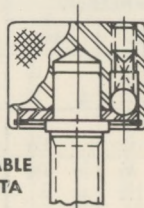
SWIVEL END
TYPES
STRS
STAS

O.D. OF PAD IS SMALLER
THAN THE MINOR HOLE DIAMETER

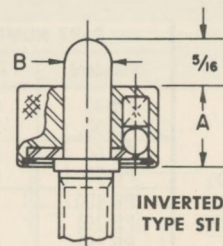
REGULAR
TYPE STR



ADJUSTABLE
TYPE STA



CHECK NUT FURNISHED
WITH EACH SCREW

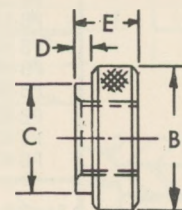
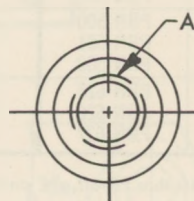
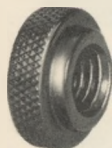


INVERTED
TYPE STI

SCREW CHECK NUTS

PART No.	A	B	C	D	E
NCS-190	10-24	3/4	7/16	1/16	3/16
NCS-250	1/4-20	3/4	1/2	1/16	7/32
NCS-312	5/16-18	3/4	1/2	1/16	1/4
NCS-375	3/8-16	1	3/4	1/8	7/16
NCS-500	1/2-13	1	3/4	1/8	7/16
NCS-625	5/8-11	1 1/16	1 3/16	1/8	1/2

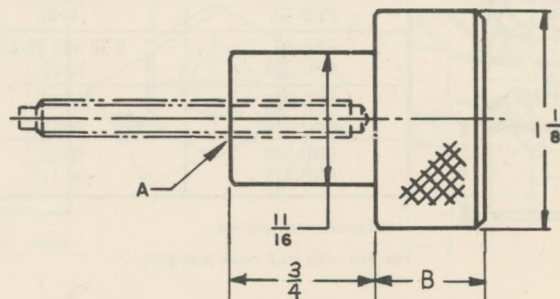
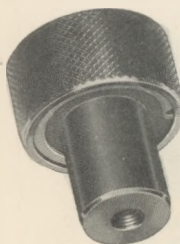
BLACK OXIDE FINISH



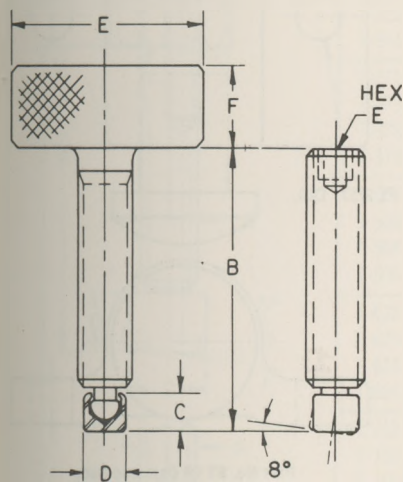
TORQUE HEADS

PART No.	A	B	End Pressure in Lbs.
HTR-190	10-24	5/16	10-12
HTR-250 HTR-312	1/4-20 5/16-18	5/16 5/16	12-14 14-16
HTR-375 HTR-500	3/8-16 1/2-13	5/16 5/16	16-18 18-20
HTA-378 HTA-528	3/8-16 1/2-13	3/4 3/4	Adjustable 0-50

BLACK OXIDE FINISH

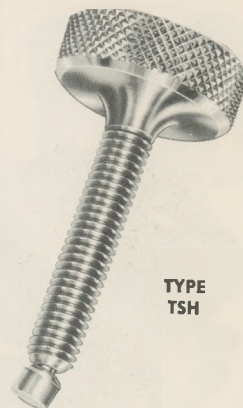


TOGGLE SCREWS

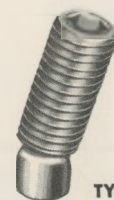


SOFT STEEL

PART No.	A	B	C	D	E	F
TSH-253 TSH-254	1/4-20	1 1/2 2	3/16	.190	1	3/8
TSH-313 TSH-314 TSH-315	5/16-18	1 1/2 2 2 1/2	7/32	.250	1 1/8	7/16
TSH-373 TSH-374 TSH-375 TSH-376	3/8-16	1 1/2 2 2 1/2 3	1/4	.281	1 1/4	1/2
TSH-503 TSH-504 TSH-505 TSH-506	1/2-13	1 1/2 2 2 1/2 3	3/8	.405	1 1/4	5/16
TSS-252 TSS-253 TSS-254 TSS-256	1/4-20	1/2 3/4 1 1 1/2	3/16	.190	1/8	
TSS-313 TSS-314 TSS-316 TSS-318	5/16-18	3/4 1 1 1/2 2	7/32	.250	5/32	
TSS-373 TSS-374 TSS-376 TSS-378	3/8-16	3/4 1 1 1/2 2	1/4	.281	3/16	
TSS-503 TSS-504 TSS-506 TSS-508 TSS-512	1/2-13	3/4 1 1 1/2 2 3	3/8	.405	1/4	
TSS-624 TSS-628 TSS-632	3/8-11	1 2 3	1 1/32	.500	5/16	

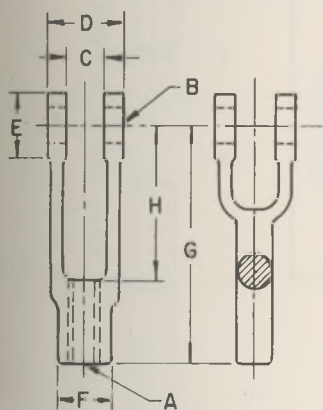


TYPE
TSH



TYPE
TSS

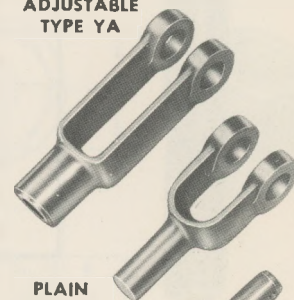
YOKE ENDS



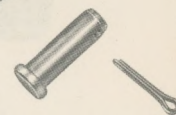
PART No.	A	B	C	D	E	F	G	H
YA-25 YP-25	1/4-28 —	1/4	9/32	5/8	1/2	7/16 1/4	2 1 1/4	1 1/4 5/8
YA-31 YP-31	5/16-24 —	5/16	11/32	3/4	19/32	1/2 5/16	2 1/4 2	1 7/16 3/4
YA-37 YP-37	3/8-24 —	3/8	7/16	7/8	11/16	5/8 3/8	2 1/2 2 1/8	1 3/8 7/8
YA-50 YP-50	1/2-20 —	1/2	9/16	1 1/8	15/16	13/16 1/2	3 2 1/2	1 7/8 1 1/8
YA-62 YP-62	5/8-18 —	5/8	11/16	1 3/8	13/16	1 1/16 5/8	4 15/16 2 7/8	3 11/16 1 1/16
YA-75 YP-75	3/4-16 —	3/4	13/16	1 5/8	1 1/16	1 1/4 3/4	6 1/16 3 3/8	4 9/16 1 11/16

Forged steel, cadmium plated. Hardened yokes furnished to special order.
Clevis and cotter pin furnished with each yoke.

ADJUSTABLE
TYPE YA



PLAIN
TYPE YP



PULL DOWEL PINS

SAE-1117 STEEL

Carburized and hardened to C-58-62
Tapped hole is soft
O.D. ground to +.0003
+.0001

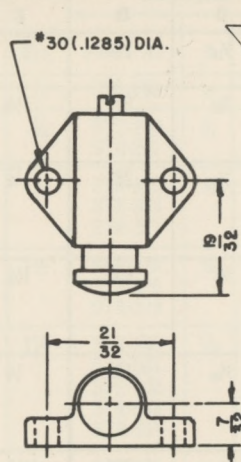
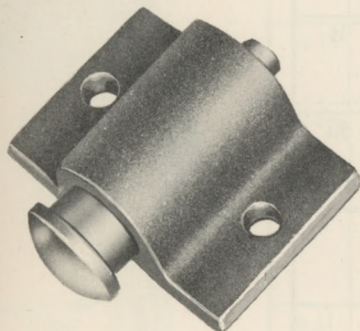
Leading end has 10° taper
Opposite, tapped end, has radius

SIZE	TAP SIZE	LENGTH								
		1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/2
1/4	8-32	X	X	X	X					
5/16	10-32	X	X	X	X	X				
3/8	10-32	X	X	X	X	X				
1/2	1/4-20	X	X	X	X	X		X	X	
5/8	1/4-20			X		X	X	X	X	
3/4	5/16-18			X		X		X	X	X
1	5/16-18					X		X	X	

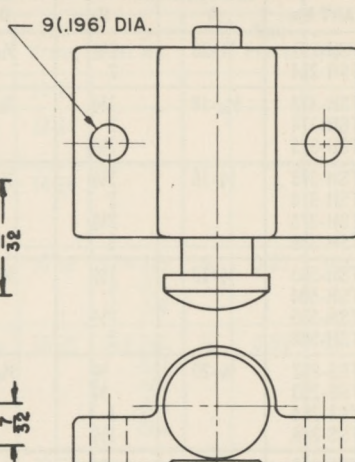


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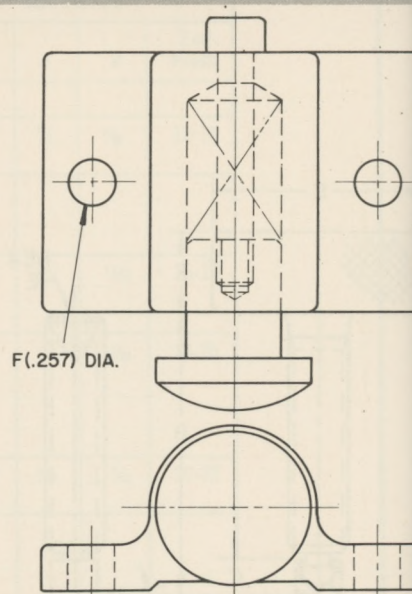
SPRING STOPS



Part No. ST-5
Aluminum Body
10# Pressure



Part No. ST-10 Cast Iron Body
ST-10A Aluminum Body
14# Pressure



Part No. ST-20 Cast Iron Body
32# Pressure

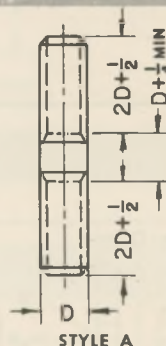
ACTUAL SIZE.

Plunger is hardened.

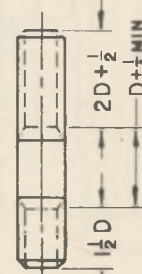
STUDS



SIZE	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10
2	X	X	X			
2 1/4	X	X	X			
2 1/2	X	X	X	X		
2 3/4	X	X	X	X		
3	X	X	X	X	X	X
3 1/2	X	X	X	X	X	X
4	X	X	X	X	X	X
4 1/2			X	X	X	X
5			X	X	X	X
5 1/2				X	X	X
6				X	X	X
7					X	X
8					X	X



STYLE A

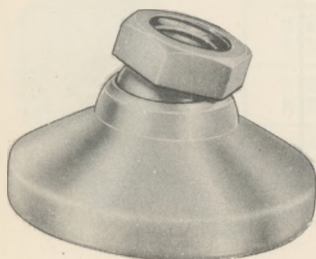


STYLE B

Studs are available in two styles, A & B. Style A has UNC-3A fit on both ends. Style B has a UNC-3A on one end & UNC-5 (stud fit) on the other. Alloy steel, heat treated to C 30-34. Tensile strength 140,000 P.S.I.

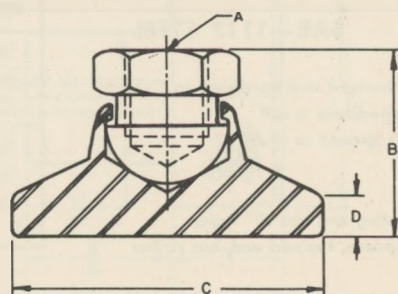
Unless otherwise specified Style A studs will be furnished.

LEVELING PADS



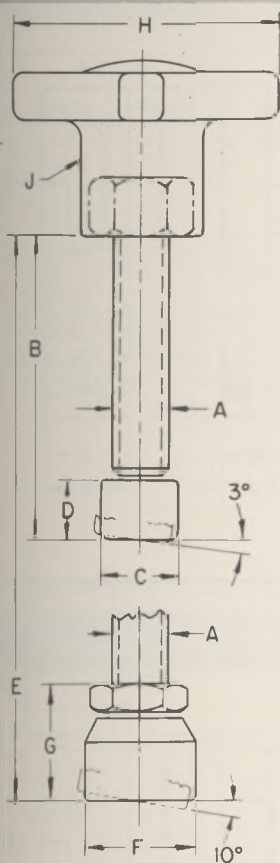
PART No.	A	B	C	D	HEX	LOAD Lbs.
LP-500	1/2-13	1 1/8	1 1/8	1/4	3/4	7,000
LP-625	5/8-11	1 1/4	2 1/2	5/16	7/8	10,000

CADMIUM PLATED



THREAD	F
10-32	
10-24	
1/4-20	
5/16-18	
3/8-16	
1/2-13	
5/8-11	
3/4-10	
1-8	

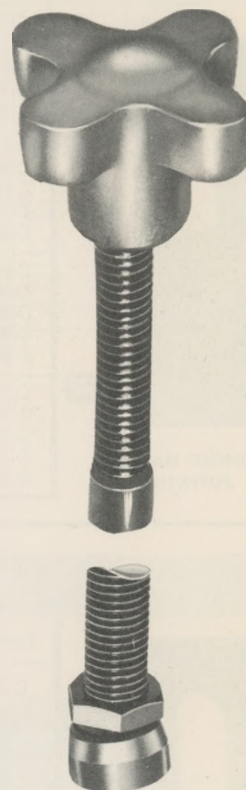
TOGGLE PAD ASSEMBLIES



PART No.		A	B	C	D	E	F	G	H	J
Type T	Type TA									
	TA-251 TA-253	1/4-20				1 7/8 3 3/8	3/8	3/8	1 1/8	HK-110
T-311 T-312 T-313 T-314	TA-312 TA-315	5/16-18	1 1/8 2 2 3/4 3 1/2	3/8	5/16	2 3 1/4	1 1/16	1 1/16	1 1/2	HK-155
T-371 T-372 T-373 T-374	TA-376 TA-377 TA-378	3/8-16	1 1/4 2 2 3/4 3 1/2	1/2	3/8	2 2 3/4 3 1/2	3/4	3/4	2	HK-206
T-502 T-503 T-504 T-505	TA-502 TA-503 TA-504	1/2-13	2 2 3/4 3 1/2 4 1/4	5/8	7/16	2 5/8 3 3/8 4 1/8	7/8	7/8	2 1/2	HK-256
T-622 T-623 T-624 T-625	TA-626 TA-627 TA-628	5/8-11	2 1/8 3 3 3/4 4 1/2	3/4	9/16	3 3 3/4 4 1/2	1	1 5/16	2 1/2	HK-257
T-752 T-753 T-754 T-755	TA-726 TA-727 TA-728	3/4-10	2 1/2 3 3/4 4 4 3/4	7/8	5/8	3 3/4 4 4 3/4	1 1/4	1 5/16	3	HK-306

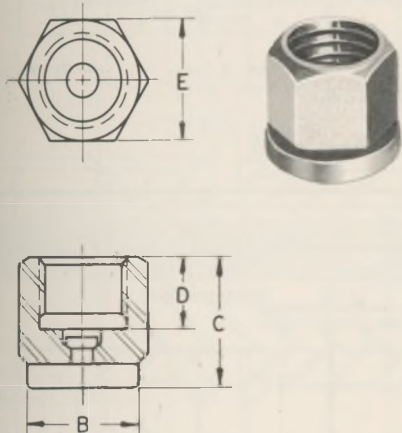
Type TA toggle screws off for assembly. Type T snaps off for assembly. Shoe cyanide hardened and black oxide finished.

Hexagon head available in type T only in each thread size in the three longest lengths. In ordering add suffix "H" to part number.

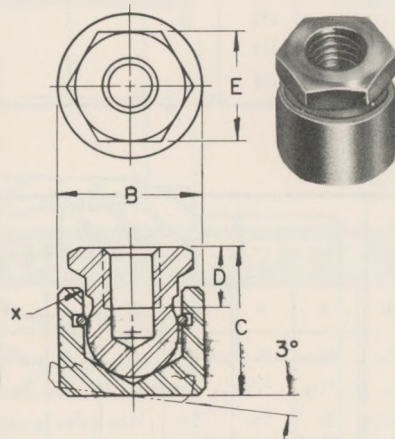


SWIVEL and TOGGLE PADS

SWIVEL PADS TYPE-NSS

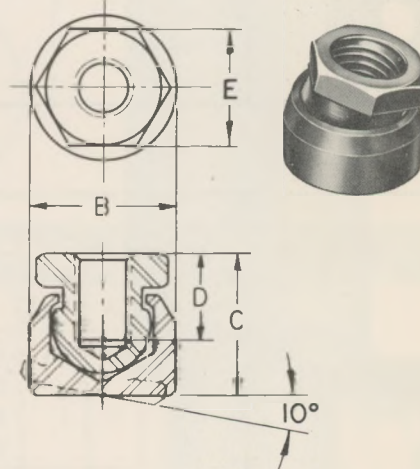


TOGGLE PADS TYPE-TS



Up to 10° Angularity available by increasing chamfer at Point X.

TOGGLE PADS TYPE-TP

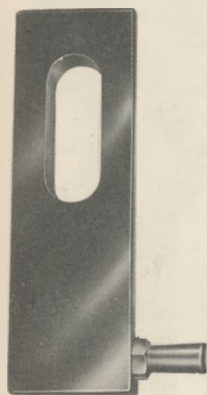


THREAD	PART No.	B	C	D	E	PART No.	B	C	D	E	PART No.	B	C	D	E
10-32	NSS-190	5/16	5/16	3/16	1/4	TS-250	5/8	5/8	1/4	7/16	TP-190	5/8	5/8	1 3/32	1/2
10-24	NSS-250	3/8	7/16	3/16	5/16	TS-312	3/4	3/4	5/16	9/16	TP-250	5/8	5/8	1 3/32	1/2
1/4-20	NSS-312	7/16	1/2	1/4	3/8	TS-375	7/8	7/8	3/8	1 1/16	TP-312	1 1/16	1 1/16	7/16	9/16
5/16-18	NSS-375	1/2	9/16	9/32	7/16						TP-375	3/4	3/4	1/2	5/8
3/8-16															
1/2-13	NSS-500	1 1/16	1 1/16	3/8	5/8	TS-500	1	1 1/8	1/2	7/8	TP-500	7/8	7/8	1 7/32	3/4
5/8-11	NSS-625	7/8	7/8	7/16	3/4	TS-625	1	1 1/8	9/16	7/8	TP-625	1	1 5/16	9/16	7/8
3/4-10											TP-750	1 1/4	1 5/16	3/4	1 1/16
1-8											TP-1000	1 5/8	1 13/16	1	1 3/8

CYANIDE HARDENED—BLACK OXIDE FINISH

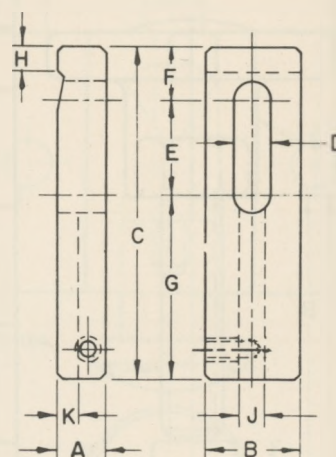
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CLAMP STRAP—Style N



FINGER HANDLE
FURNISHED

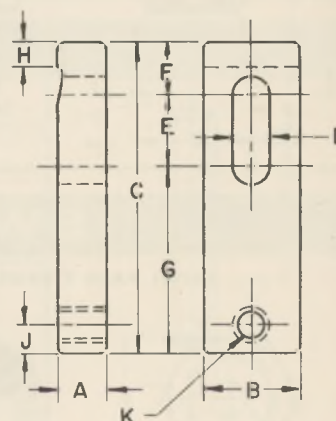
PART No.	A	B	C	D	E	F	G	H	J	K
C-220-N C-225-N	3/8	5/8	2 2 1/2	9/32	1/2 1	3/8	1 1/8	1/8	3/16	1/8
C-430-N C-435-N C-440-N	1/2	1	3 3 1/2 4	13/32	1/2 1 1 1/2	9/16	1 15/16	1/4	3/8	7/32
C-535-N C-540-N C-545-N C-555-N C-560-N	5/8	1 1/4	3 1/2 4 4 1/2 5 1/2 6	17/32	1 1/16 1 1 1/2 2 2	9/16 3/4	2 1/4	5/16	3/8	9/32
C-640-N C-645-N C-650-N C-660-N C-665-N	3/8	1 1/2	4 4 1/2 5 6 6 1/2	2 1/32	13/16 1 1/8 1 3/8 2 1/8 2 1/8	11/16 7/8	2 1/2	3/8	1/2	9/32
C-750-N C-760-N C-765-N C-775-N C-780-N	1	1 3/4	5 6 6 1/2 7 1/2 8	2 5/32	1 3/8 1 1/8 2 1/8 2 5/8 2 5/8	7/8 1 1/8	2 3/4 3 1/4	3/8	1/2	9/32



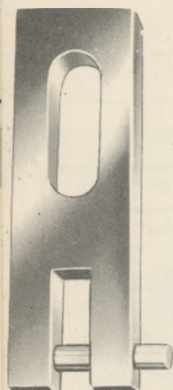
CLAMP STRAP—Style H



PART No.	A	B	C	D	E	F	G	H	J	K
C-220-H C-225-H	3/8	5/8	2 2 1/2	9/32	1/2 1 1/16	3/8 1 1/16	1 1/8	1/8	3/16	1/4 - 20
C-432-H C-437-H	1/2	1	3 1/4 3 3/4	13/32	3/4 1	9/16 13/16	1 15/16	1/4	5/16	3/8 - 16
C-535-H C-540-H C-545-H C-550-H	5/8	1 1/4	3 1/2 4 4 1/2 5	17/32	1 1/16 1 1 1/2 1 1/2	9/16 3/4 3/4 1 1/4	2 1/4	5/16	7/16	1/2 - 13
C-640-H C-645-H C-650-H C-655-H	3/4	1 1/2	4 4 1/2 5 5 1/2	2 1/32	13/16 1 1/8 1 1/2 1 1/2	11/16 7/8 1 1 1/2	2 1/2	3/8	1/2	5/8 - 11

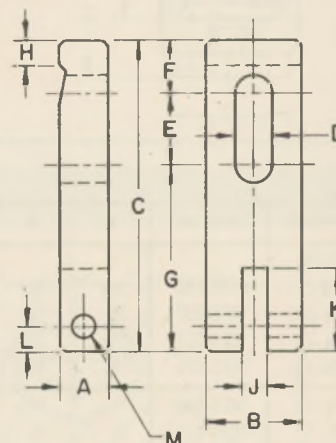


CLAMP STRAP—Style C



DOWEL PIN
FURNISHED

PART No.	A	B	C	D	E	F	G	H	J	K	L	M
C-220-C C-225-C	3/8	5/8	2 2 1/2	9/32	1/2 1 1/16	3/8 1 1/16	1 1/8	1/8	3/16	5/8	5/32	5/32
C-432-C C-437-C	1/2	1	3 1/4 3 3/4	13/32	3/4 1	9/16 13/16	1 15/16	1/4	1/4	7/8	1/4	1/4
C-535-C C-540-C C-545-C C-550-C C-555-C	5/8	1 1/4	3 1/2 4 4 1/2 5 5 1/2	17/32	1 1/16 1 1 1/2 1 1/2 1 1/2	9/16 3/4 3/4 1 1/4 1 3/4	2 1/4	5/16	3/8	1 3/16	5/16	5/16
C-640-C C-645-C C-650-C C-655-C	3/4	1 1/2	4 4 1/2 5 5 1/2	2 1/32	13/16 1 1/8 1 1/2 1 1/2	11/16 7/8 1 1 1/2	2 1/2	3/8	1/2	1 3/8	3/8	3/8

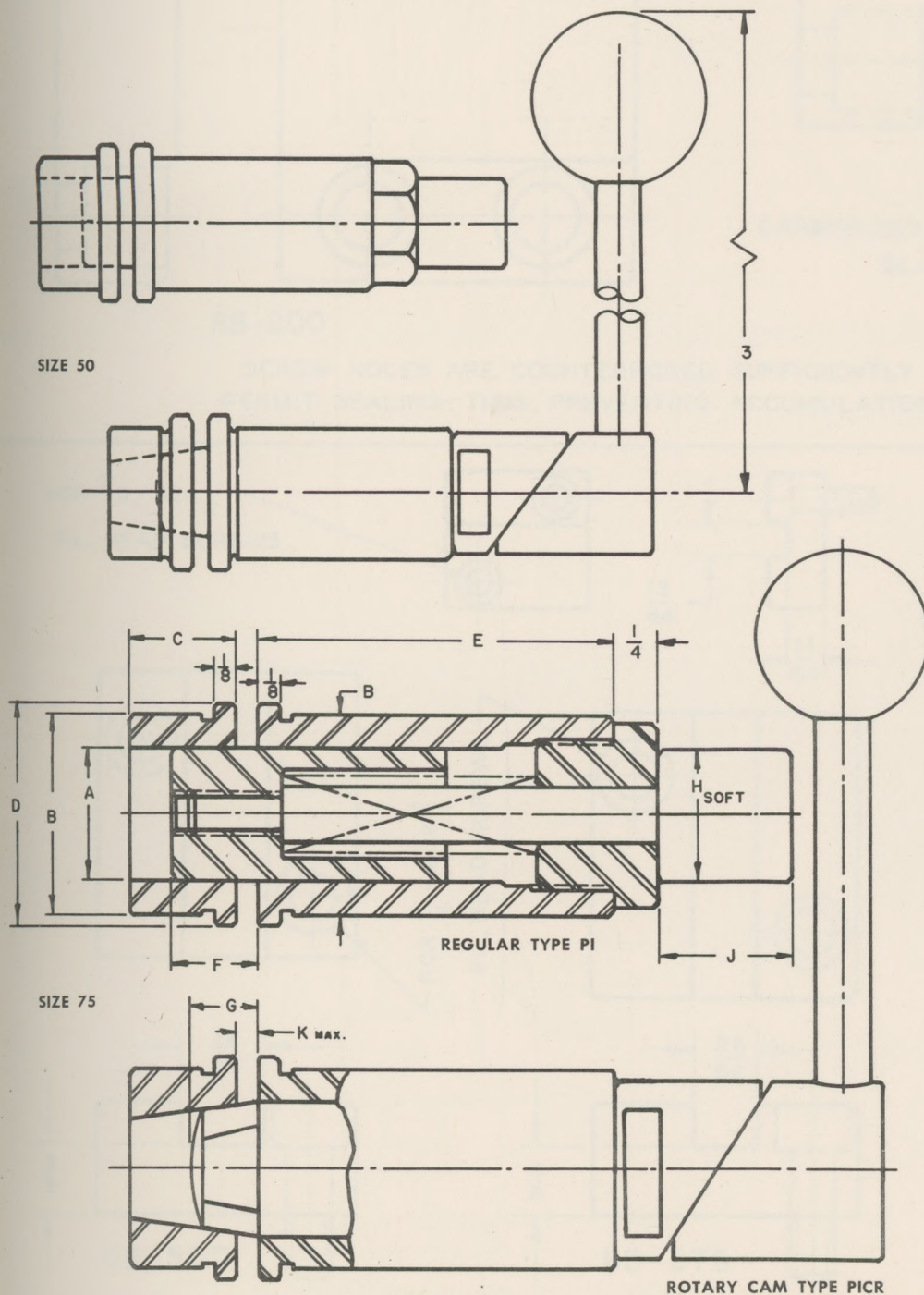


Clamps are SAE 1020 steel, carburized, hardened and Black Oxide finished. Finger handle is furnished with style N strap. See template sheets for application.

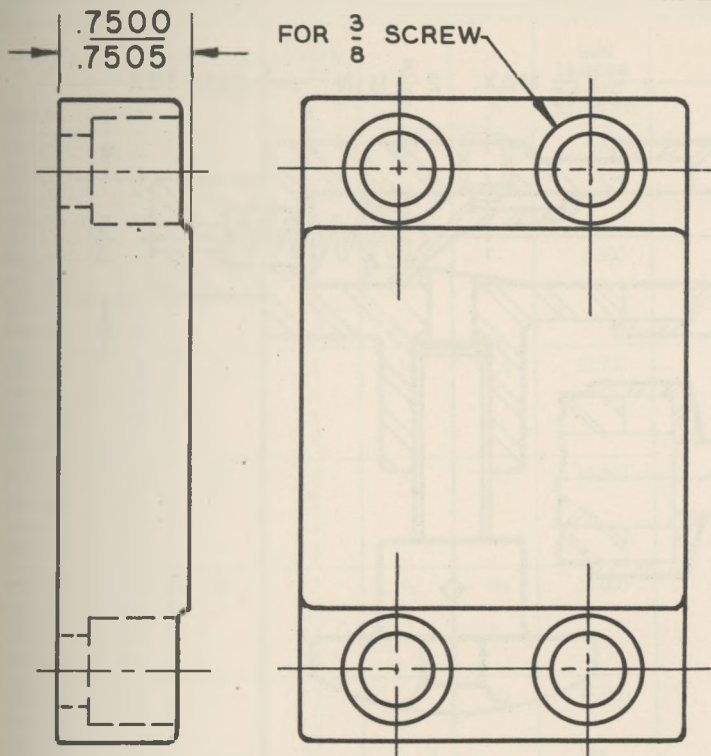
INDEX PLUNGERS

INDEX PLUNGERS													BUSHINGS		Tapered Grinding Arbors
PART No.		A	+.0003 -0 B	+.005 -0 B	C	D	E	F	G	H	J	K	PART No.		
Straight	Tapered												Straight	Tapered	
PI-50 PI-50X	PIT-50 PIT-50X	½	.7515	.765	½	⅞	1⅜	⅝ ₁₆	⅝ ₁₆	½	½	⅜ ₃₂	PIB-50 PIB-50X	PIBT-50 PIBT-50X	PITA-50
PICR-50 PICR-50X	PITCR-50 PITCR-50X		.7515	.765						2⅜ ₃₂	1⅞		PIB-50 PIB-50X	PIBT-50 PIBT-50X	
PI-75 PI-75X	PIT-75 PIT-75X	¾	1.1265	1.140	⅝	1¼	2	½	⅜	¾	¾	⅛	PIB-75 PIB-75X	PIBT-75 PIBT-75X	PITA-75
PICR-75 PICR-75X	PITCR-75 PITCR-75X		1.1265	1.140						1	1½		PIB-75 PIB-75X	PIBT-75 PIBT-75X	

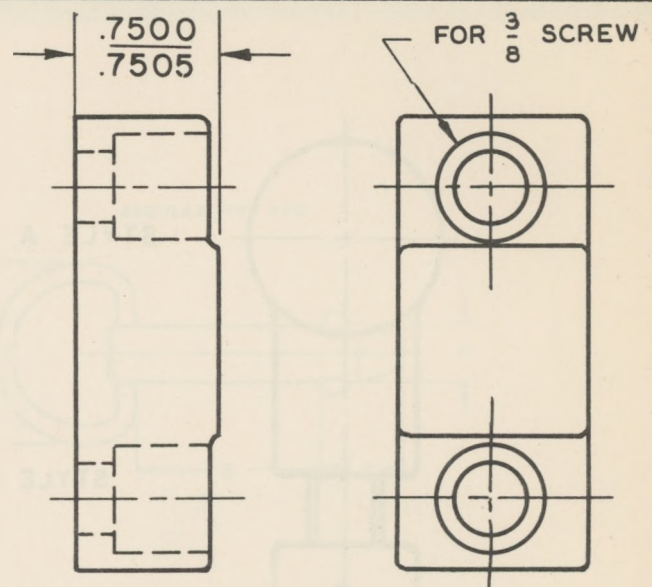
SIZE 50



ACTUAL SIZE
TEMPLATES



RB-200



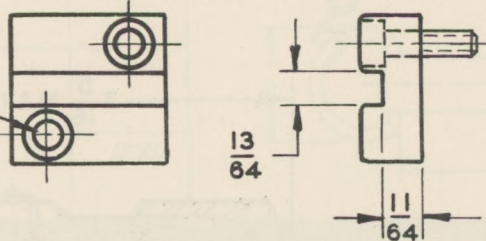
RB-100

CARBURIZED - HARDENED AND GROUND
BLACK OXIDE FINISH

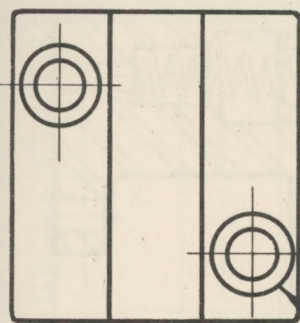
SCREW HOLES ARE COUNTERBORED SUFFICIENTLY DEEP TO
PERMIT SEALING; THUS, PREVENTING ACCUMULATION OF CHIPS.

REST BLOCKS

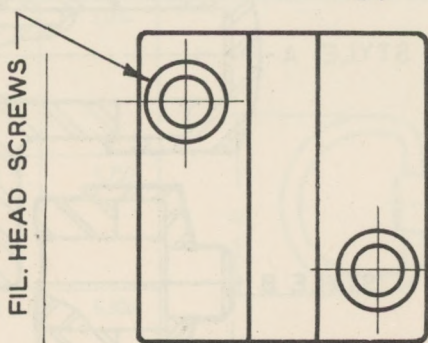
FOR #6 - 32 x $\frac{1}{2}$
FIL. HEAD SCREWS



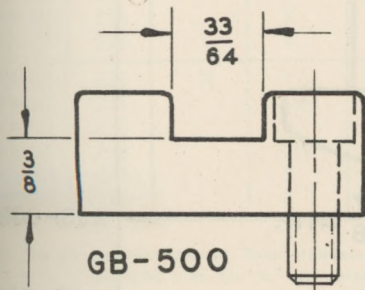
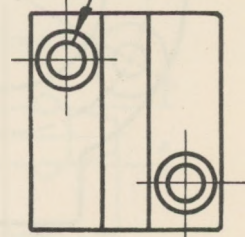
GB-187



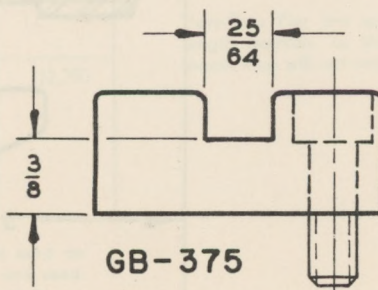
FOR $\frac{1}{4}$ - 20 x $\frac{3}{4}$
FIL. HEAD SCREWS



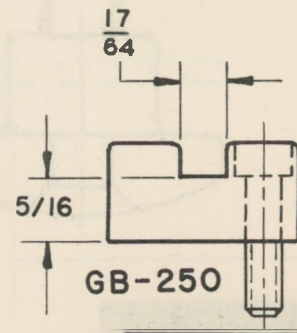
FOR #10 - 32 x $\frac{3}{4}$
FIL. HEAD SCREWS



GB-500



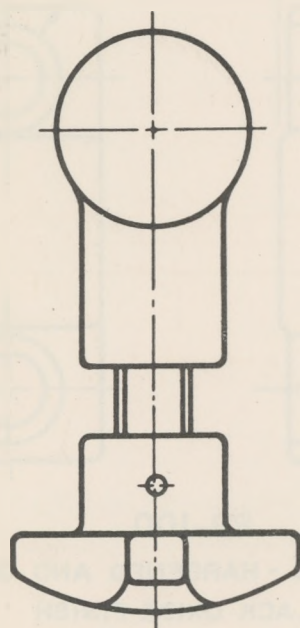
GB-375



GB-250

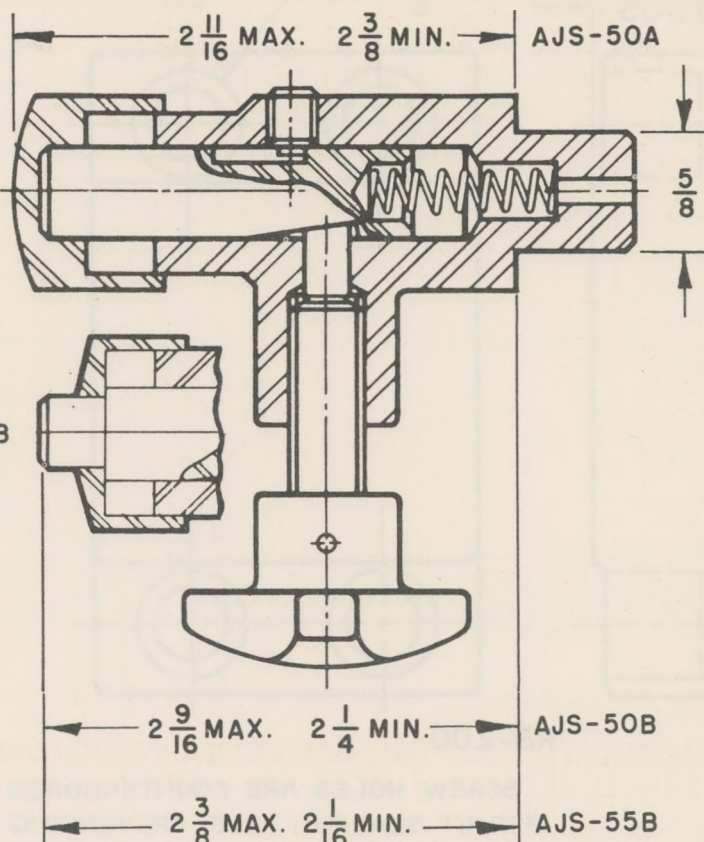
CYANIDE HARDENED - BLACK OXIDE FINISH

GUIDE BLOCKS

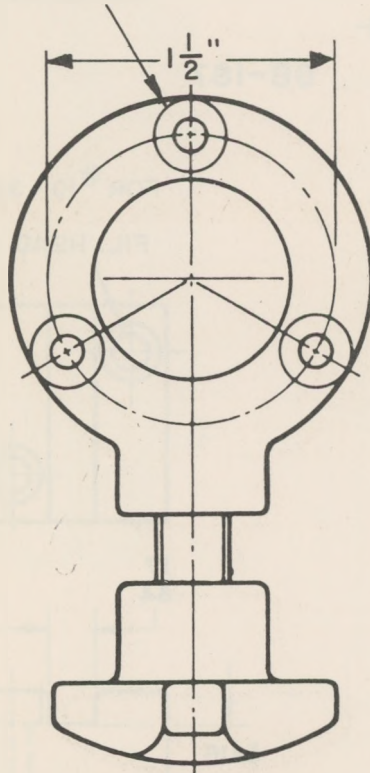


STYLE A

STYLE B

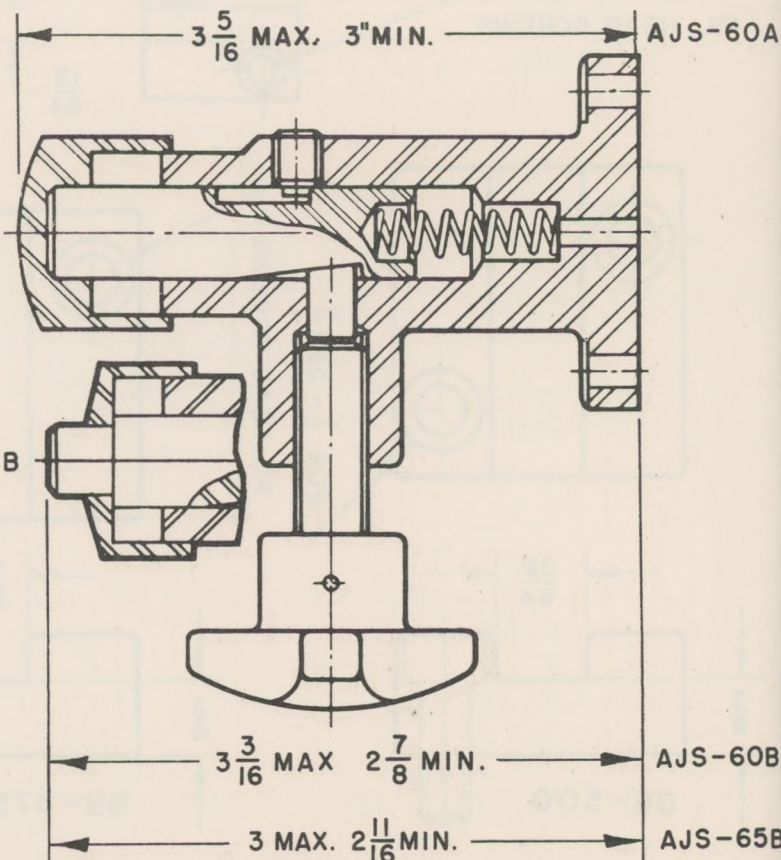


FOR # 10 SCREW



STYLE A

STYLE B



SPRING JACKS

PART No.

PRQ-250
PRQ-251
PRQ-252
PRQ-253

PRQ-375
PRQ-376
PRQ-377
PRQ-378

PRQ-500
PRQ-501
PRQ-502
PRQ-503

PRQ-625
PRQ-626
PRQ-627
PRQ-628

PRQ-750
PRQ-751
PRQ-752
PRQ-753

PRQ-1001
PRQ-1002
PRQ-1003
PRQ-1004

PRQD-510
PRQD-511
PRQD-512

PRQD-630
PRQD-631
PRQD-632

PRQD-760
PRQD-761
PRQD-762

PRQD-1010
PRQD-1011
PRQD-1012

PRQV-260
PRQV-261
PRQV-262
PRQV-263
PRQV-264
PRQV-265

PRQV-320
PRQV-321
PRQV-322
PRQV-323
PRQV-324

PRQV-380
PRQV-381
PRQV-382
PRQV-383
PRQV-384

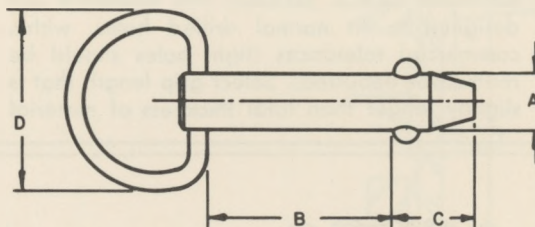
PRQV-520
PRQV-521
PRQV-522
PRQV-523
PRQV-524
PRQV-525

All pins are ca
all 3/8 to 1" di
Other diameter

QUICK RELEASE PINS

PART No.	PRICE	PIN DIA. +0 -0.002 A	GRIP LENGTH +.032 -0 B	C	D	MIN. SHEAR LOAD 90,000 PSI
PRQ-250	\$1.05	1/4	0.6	3/16	1	3,000
PRQ-251	1.05		1.1			
PRQ-252	1.05		1.6			
PRQ-253	1.10		2.1			
PRQ-375	1.50	3/8	1.1	1/2	1	6,900
PRQ-376	1.50		1.6			
PRQ-377	1.50		2.1			
PRQ-378	1.60		2.6			
PRQ-500	1.90	1/2	1.1	5/8	1 1/8	12,700
PRQ-501	1.90		1.6			
PRQ-502	1.90		2.1			
PRQ-503	2.00		2.6			
PRQ-625	2.45	5/8	1.6	3/4	1 1/8	19,000
PRQ-626	2.45		2.1			
PRQ-627	2.50		2.6			
PRQ-628	2.55		3.1			
PRQ-750	2.95	3/4	2.1	7/8	1 3/4	33,000
PRQ-751	2.95		2.6			
PRQ-752	3.00		3.1			
PRQ-753	3.05		3.6			
PRQ-1001	3.95	1	2.1	1	1 3/4	48,000
PRQ-1002	3.95		2.6			
PRQ-1003	4.00		3.1			
PRQ-1004	4.00		4.1			

REGULAR TYPE PRQ



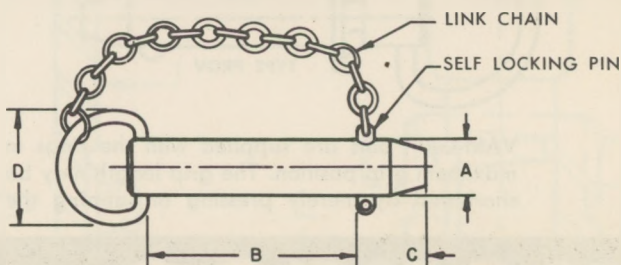
PRQD-510	2.95	1/2	1.6	5/8	1 1/8	12,200
PRQD-511	2.95		2.1			
PRQD-512	3.30		3.1			
PRQD-630	3.45	5/8	1.6	3/4	1 1/8	19,000
PRQD-631	3.45		2.1			
PRQD-632	3.75		3.1			
PRQD-760	4.45	3/4	1.6	7/8	1 3/4	33,000
PRQD-761	4.45		2.1			
PRQD-762	4.85		3.1			
PRQD-1010	5.25	1	2.1	1	1 3/4	48,000
PRQD-1011	5.35		3.1			
PRQD-1012	5.45		4.1			

DUO-TYPE PRQD

WELDED

LINK CHAIN

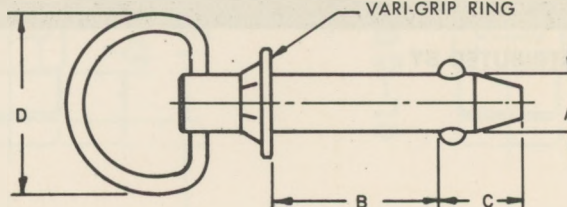
SELF LOCKING PIN



PRQV-260	1.15	1/4	1/2 max.	3/16	1	3,000
PRQV-261	1.15		1			
PRQV-262	1.30		1 1/2			
PRQV-263	1.30		2			
PRQV-264	1.50		3			
PRQV-265	1.50		4			
PRQV-320	1.40	5/16	1	1/2	1	4,750
PRQV-321	1.40		1 1/2			
PRQV-322	1.55		2			
PRQV-323	1.65		3			
PRQV-324	1.90		4			
PRQV-380	1.60	3/8	1	1/2	1	6,900
PRQV-381	1.65		1 1/2			
PRQV-382	1.80		2			
PRQV-383	1.85		3			
PRQV-384	1.95		4			
PRQV-520	2.15	1/2	1	5/8	1 1/8	12,200
PRQV-521	2.15		1 1/2			
PRQV-522	2.40		2			
PRQV-523	2.40		2 1/2			
PRQV-524	2.65		3			
PRQV-525	2.65		4			

VARI-TYPE PRQV

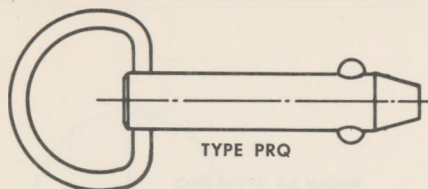
VARI-GRIP RING



Vari-Grip Pins are supplied with the ring in maximum grip length position. To shorten length, tap ring forward along shank. Ring will not retract.

All pins are cadmium plated. Dual stainless steel locking balls used on all 3/8 to 1" diameter pins. On 1/4" diameter pins, single balls are used. Other diameters, grip lengths, materials etc., available on request.

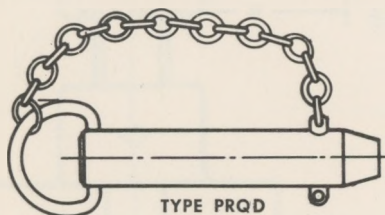
QUICK RELEASE PINS



REGULAR QUICK RELEASE PIN diameters are designed to fit normal drilled holes, within commercial tolerances (tight holes should be reamed or deburred). Select grip length that is slightly longer than total thickness of material

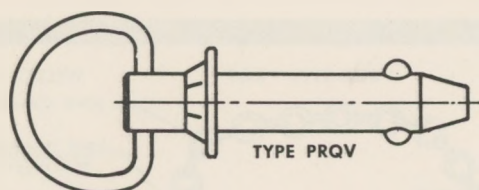
For shear loads—In standard drilled or punched holes—as found on farm and commercial vehicles, marine, aircraft, and industrial handling equipment, scaffolding, antenna masts, tow bars, hoists, shackles, etc. Push to insert—Pull to release.

through which pin will be inserted, i.e. use 1.6 grip length pin for $1\frac{1}{2}$ material thickness. Use 2.1 grip length for 2" thickness material. This provides for maximum safety factor.



For tension and shear loads—Double pin sets, chained together to prevent loss—a fool proof positive lock pin design—one hand operation. A double safety pin for hoists, shackles and towing.

DUO PIN SETS consist of master-pin and lock pin attached by chain. Alternate designs quoted on request.



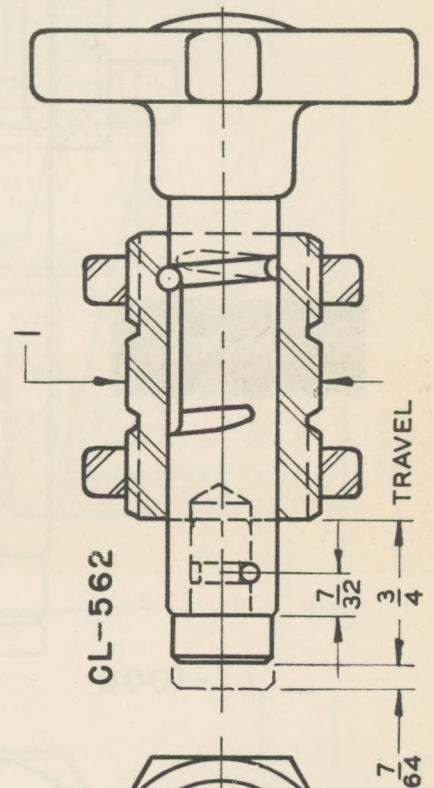
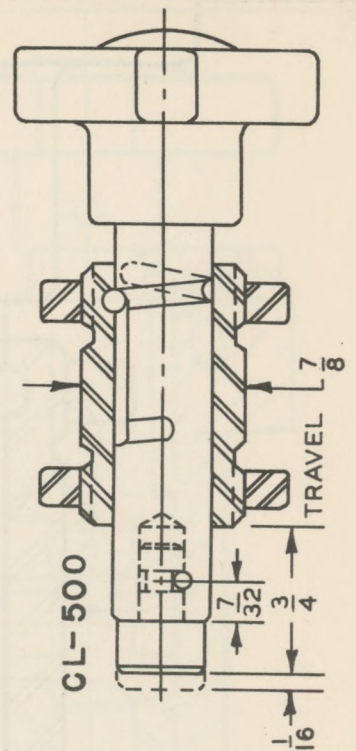
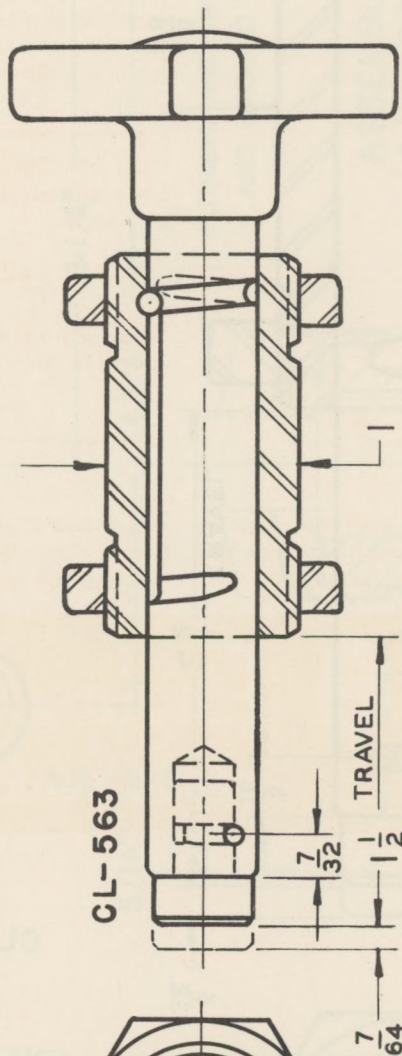
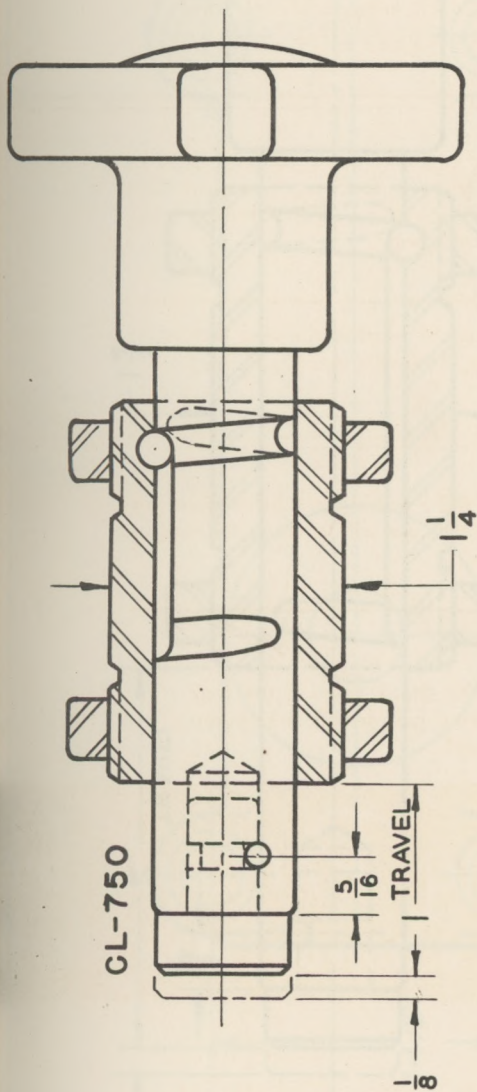
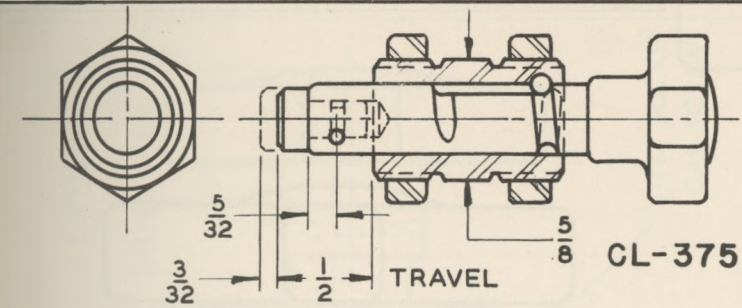
VARI-GRIP pins are supplied with the rings in maximum grip position. The grip length may be shortened by merely pressing or tapping the

Same as basic type PRQ Pins but have adjustable grip length feature. One stock pin will fit many thicknesses.

ring forward along the shank toward the lock button. Once the desired grip length is reached the ring will not retract.

monroe Engineering Products Inc.
14830 Fenkell ■ Detroit, Mich. 4822

DISTRIBUTED BY:

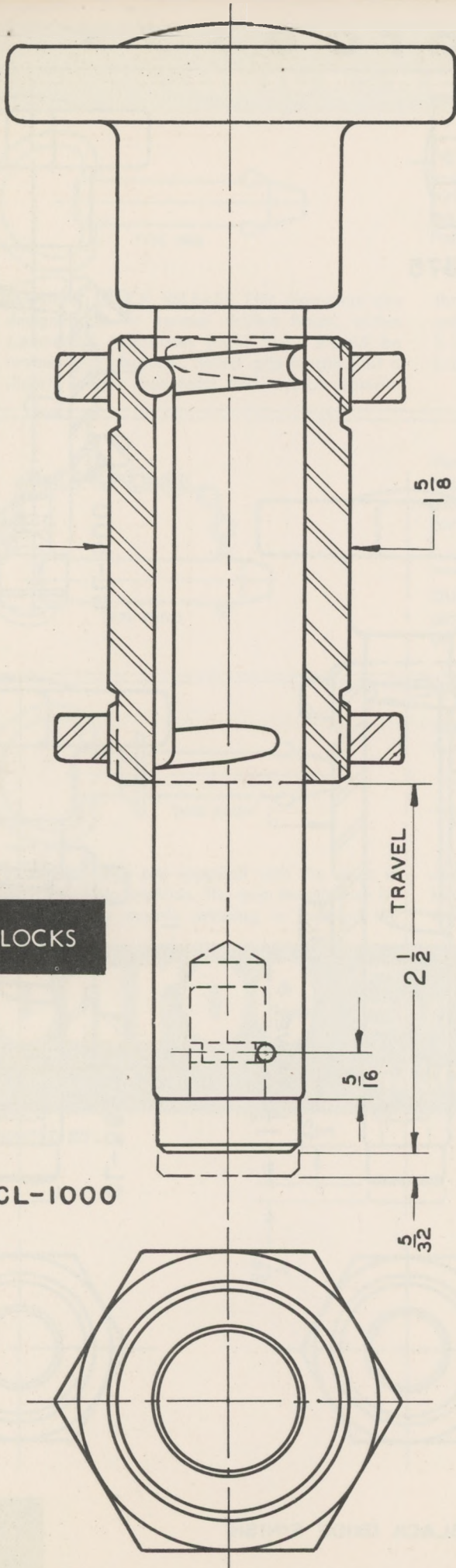


HARDENED AND GROUND - BLACK OXIDE FINISH

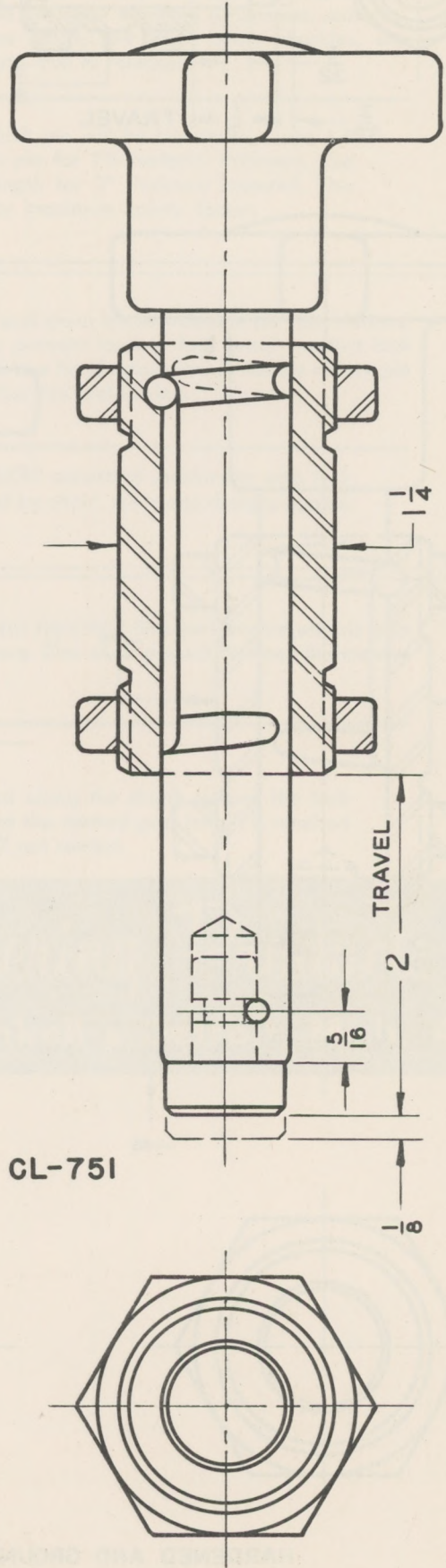
CAM LOCKS

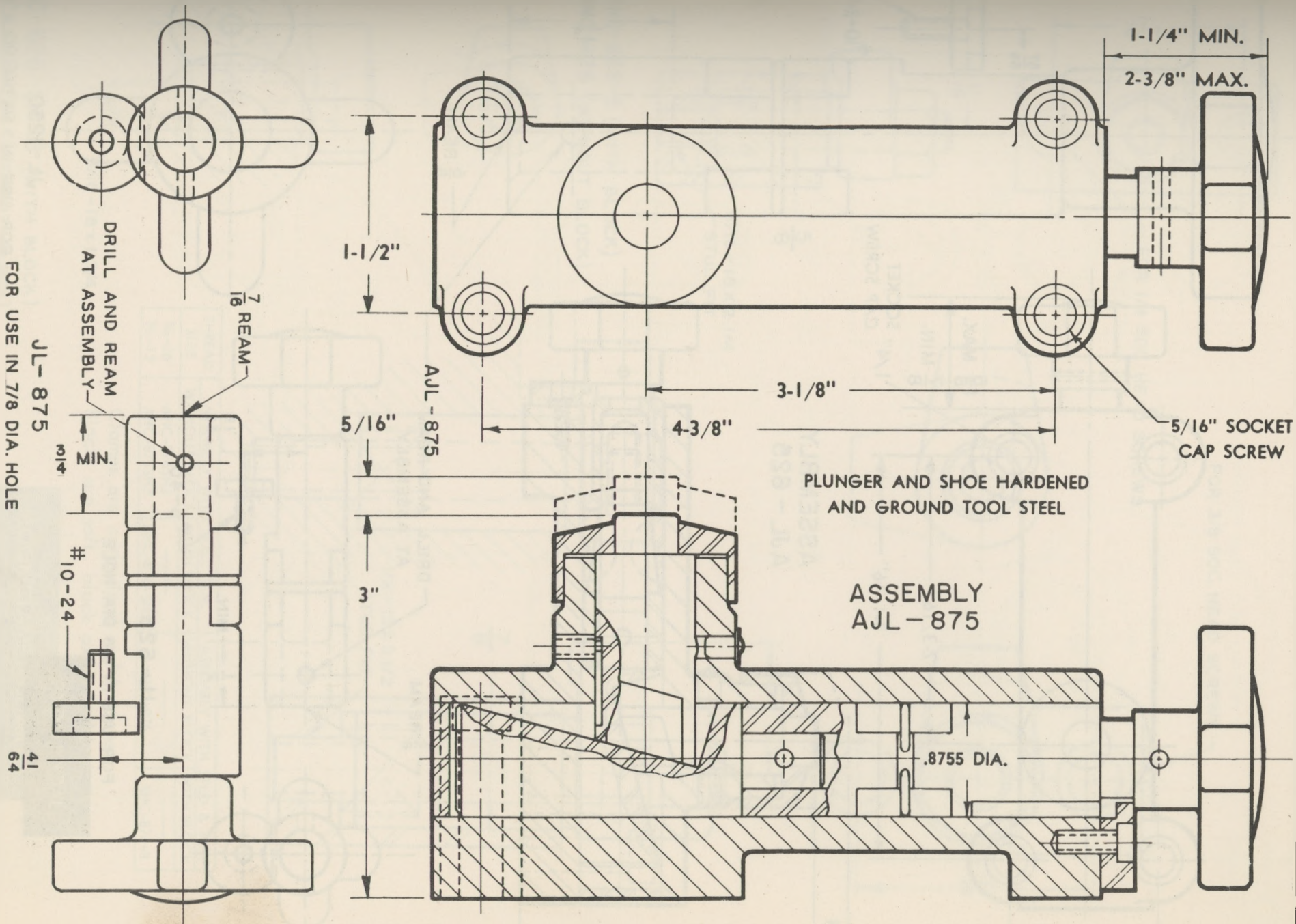
CAM LOCKS

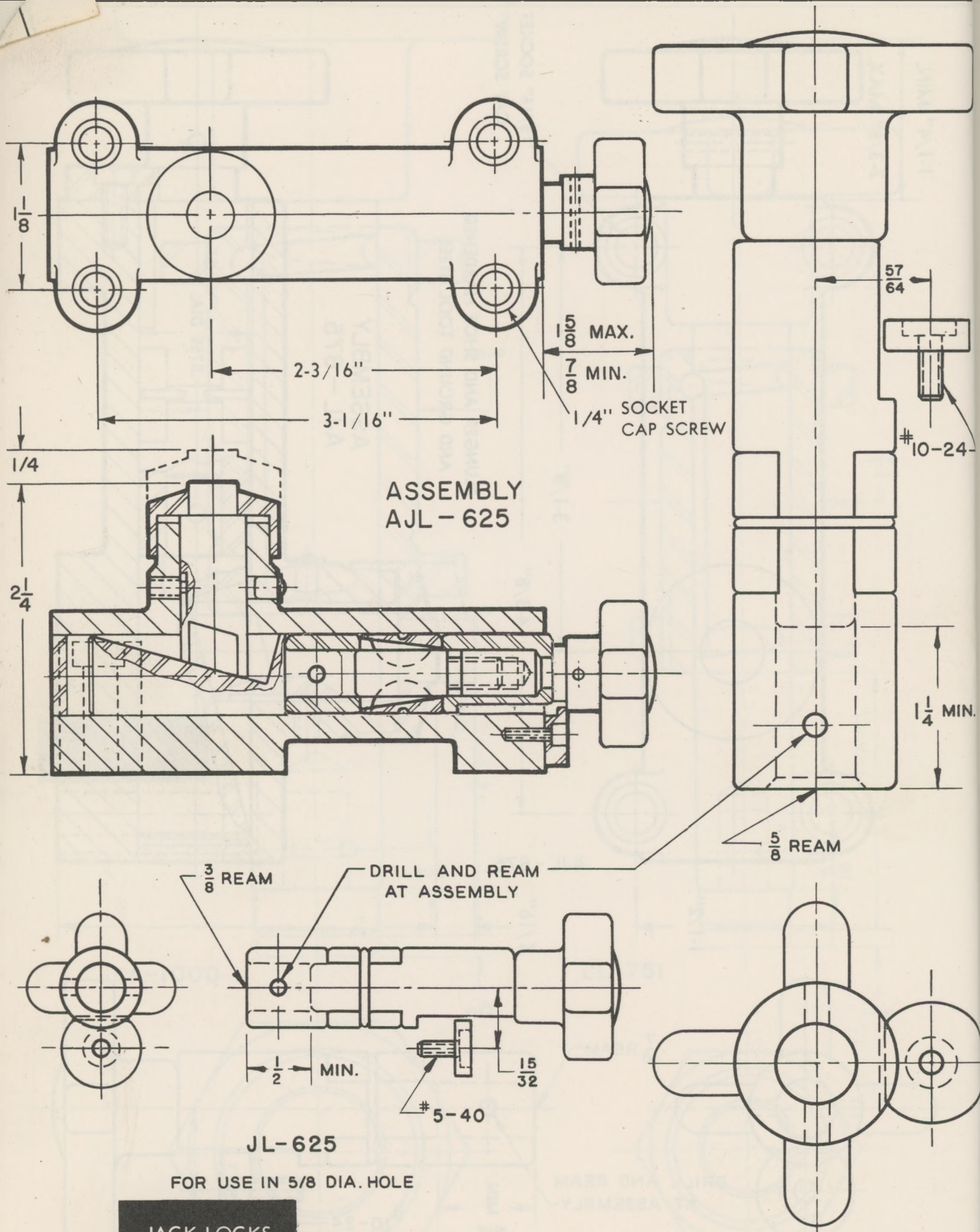
CL-1000

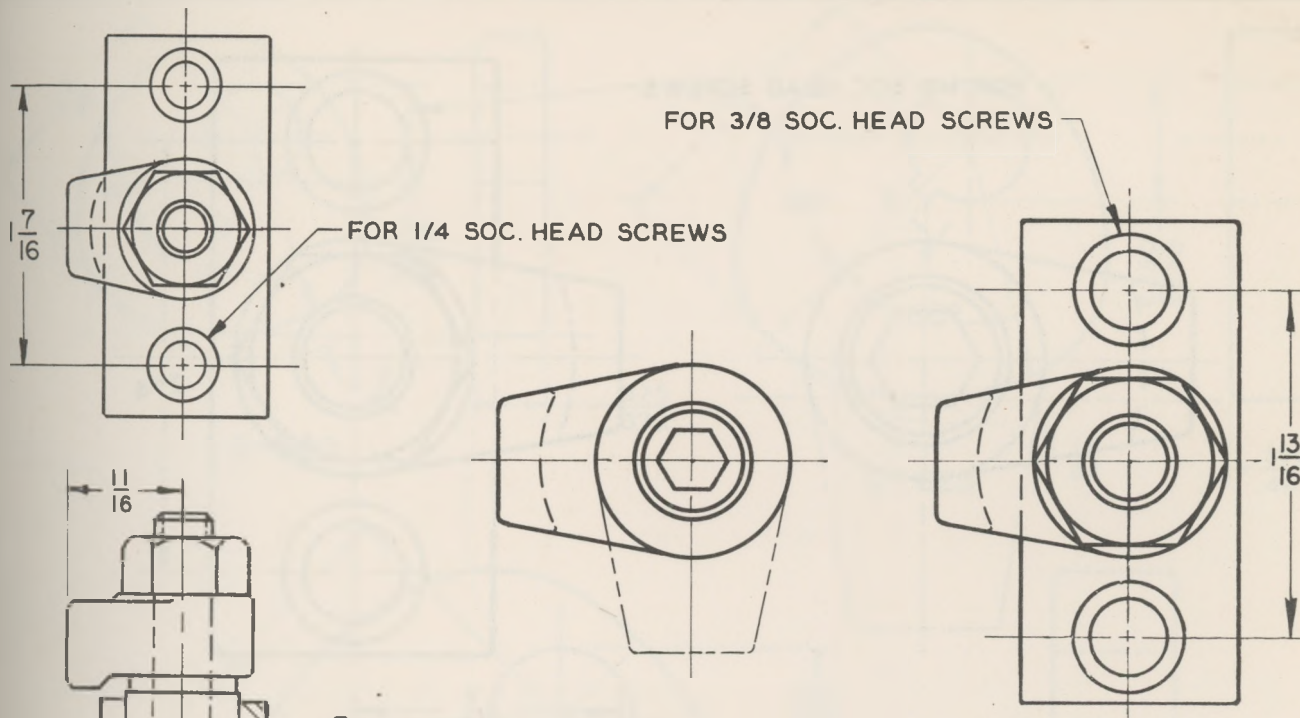


CL-751

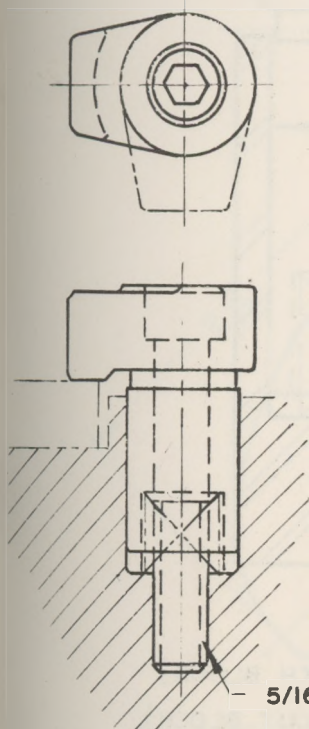








AHC-626-B (WITH BLOCK)
AHC-626 (WITHOUT BLOCK)

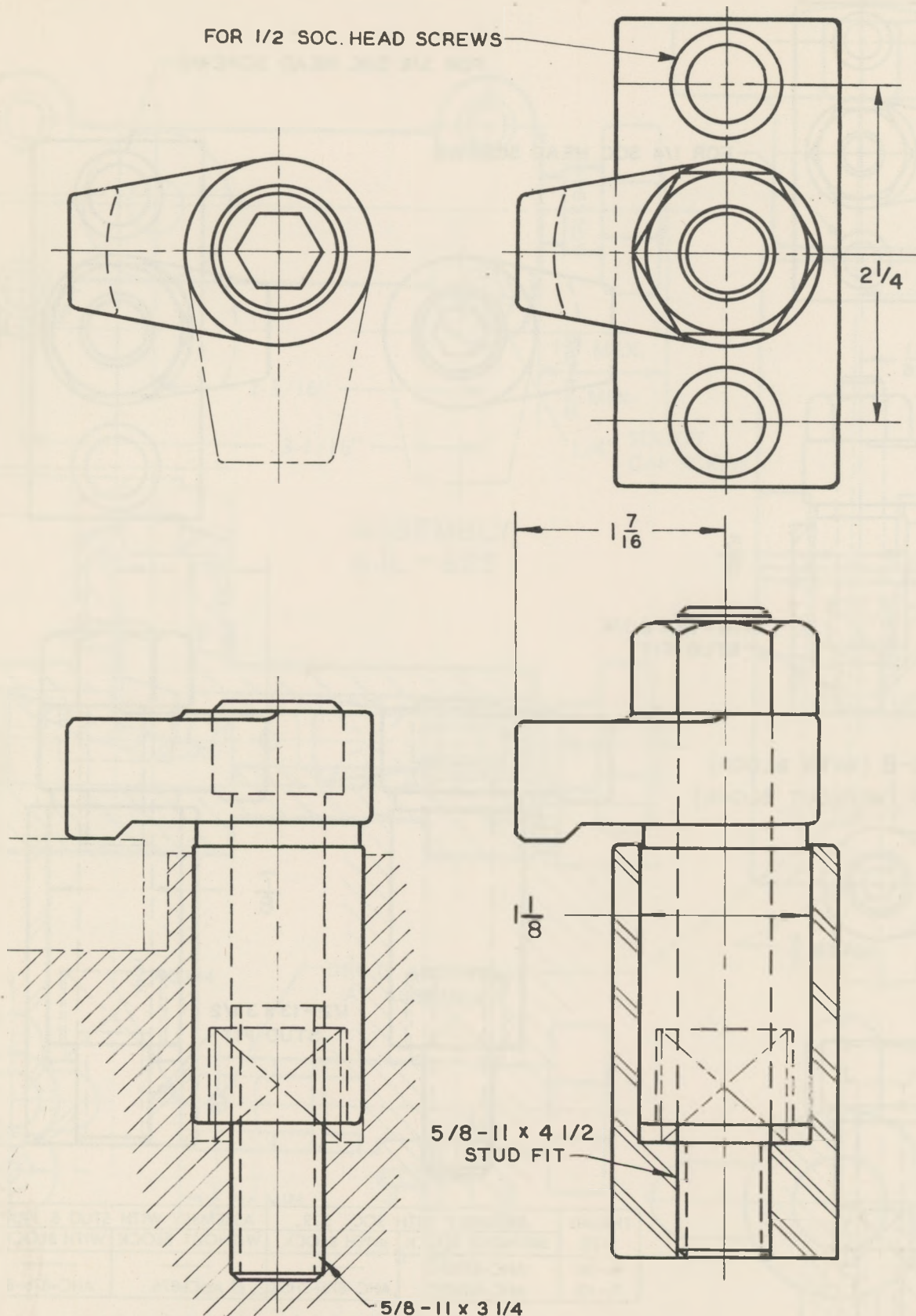


THREAD SIZE	ASSEMBLY WITH SOC. SCR.		ASSEMBLY WITH STUD & NUT	
	WITHOUT BLOCK	WITH BLOCK	WITHOUT BLOCK	WITH BLOCK
3/8-16	AHC-876SH3	—	—	—
1/2-13	AHC-876SH5	AHC-876-SH5B	AHC-876	AHC-876-B

Clamps are carburized and hardened.
Blocks are soft, black oxide finished.

AHC-626-SH-B (WITH BLOCK)
AHC-626-SH (WITHOUT BLOCK)

HOOK CLAMP ASSEMBLIES



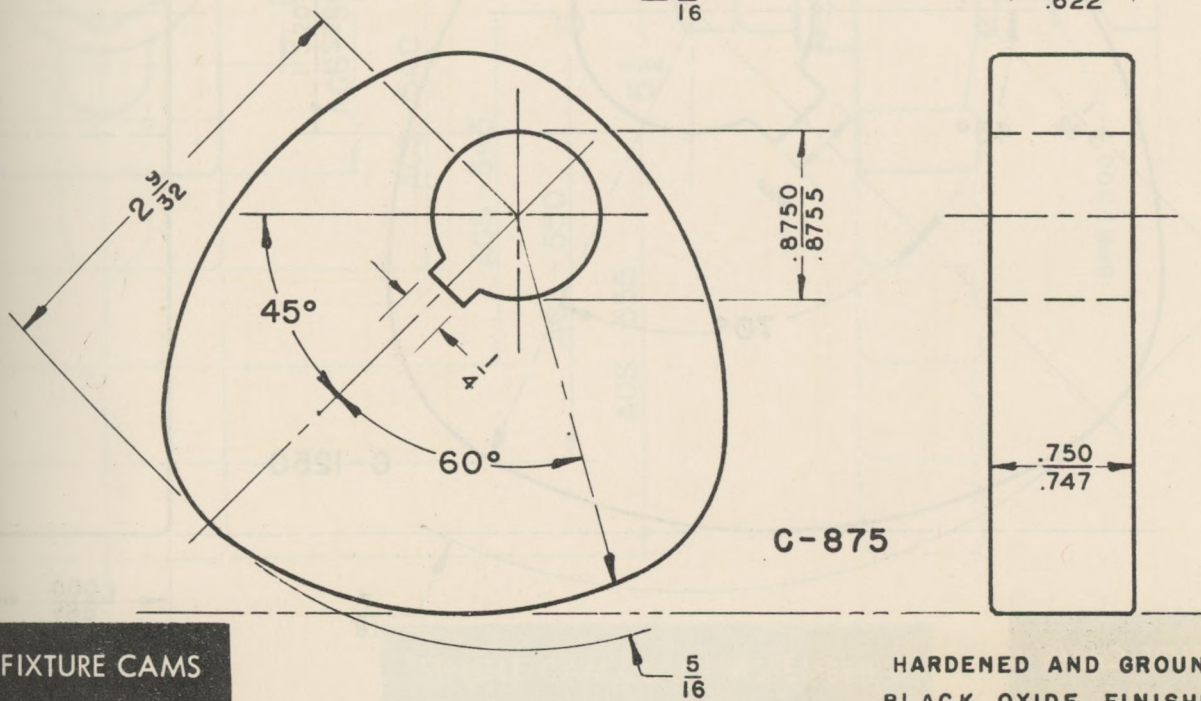
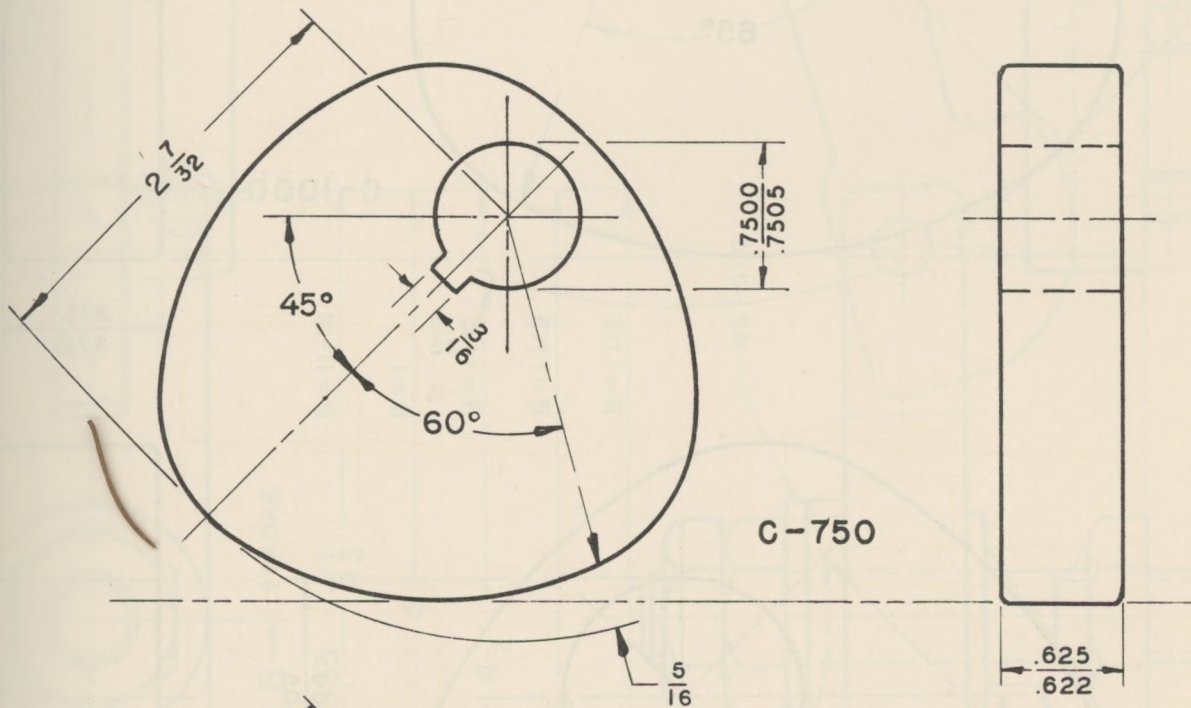
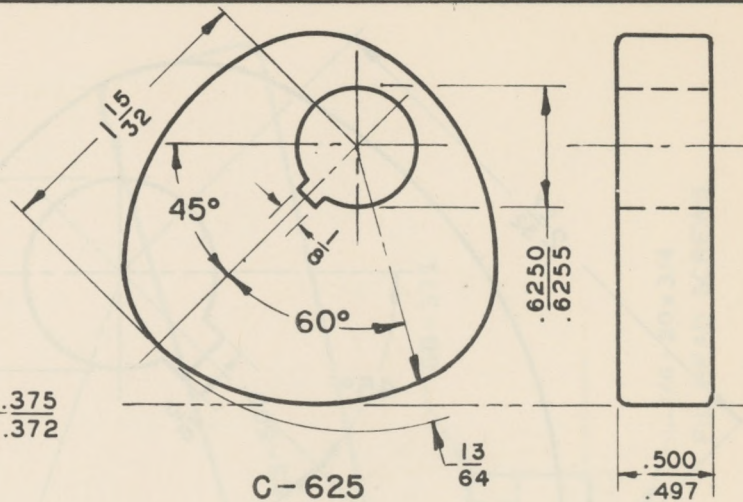
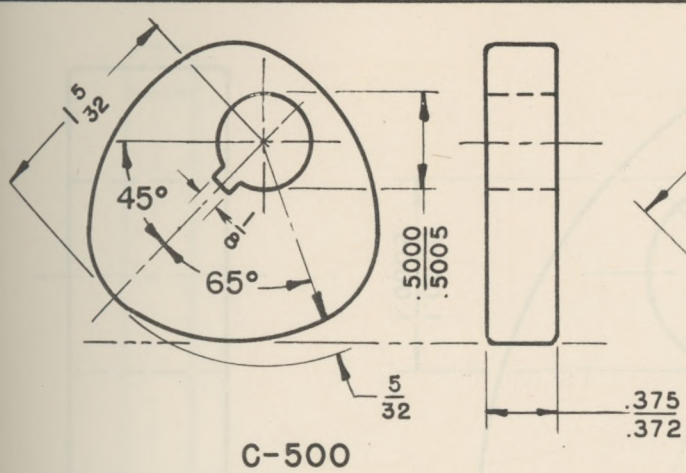
AHC-1126-SH (WITHOUT BLOCK)

AHC-1126-SHB (WITH BLOCK)

AHC-1126-B (WITH BLOCK)

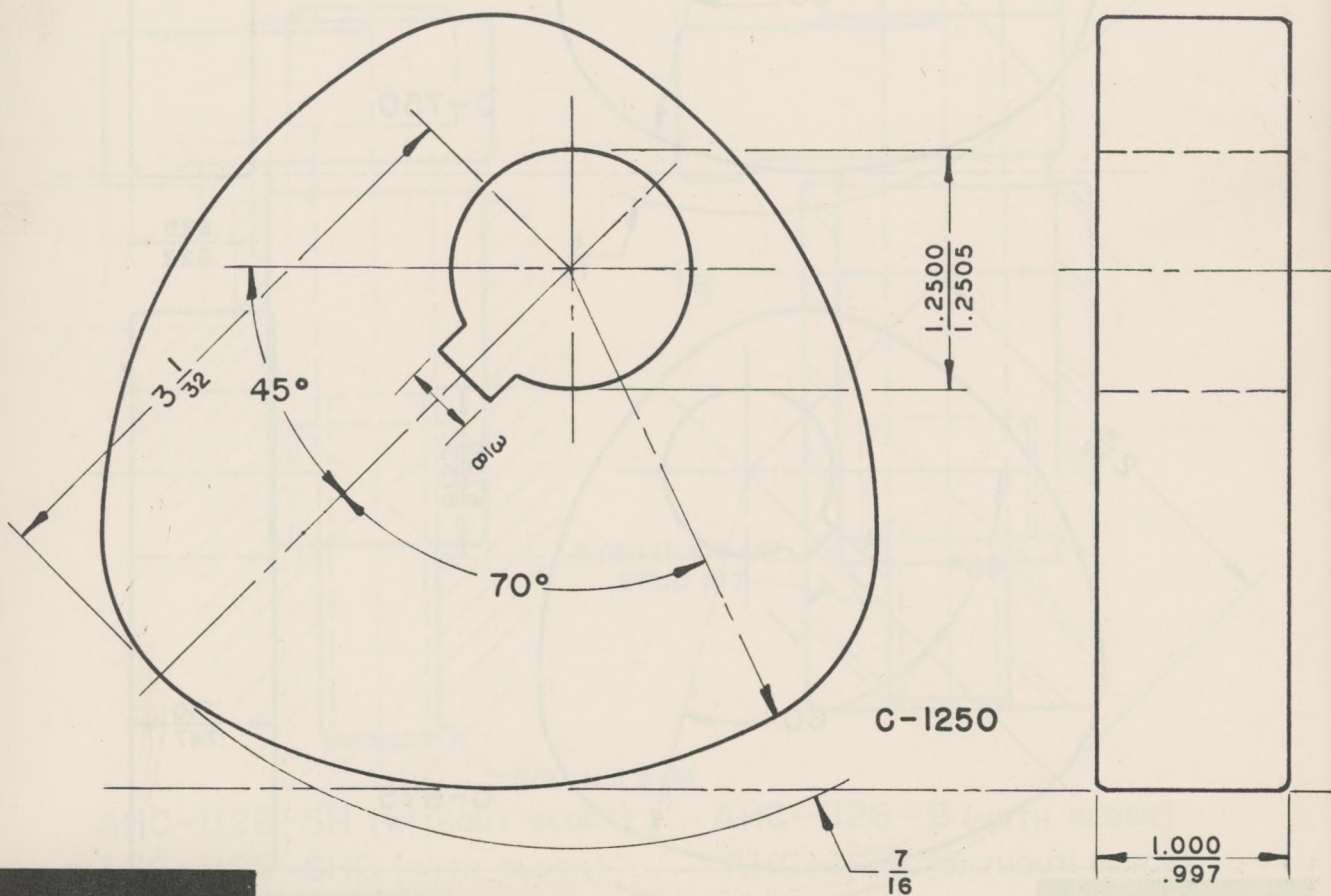
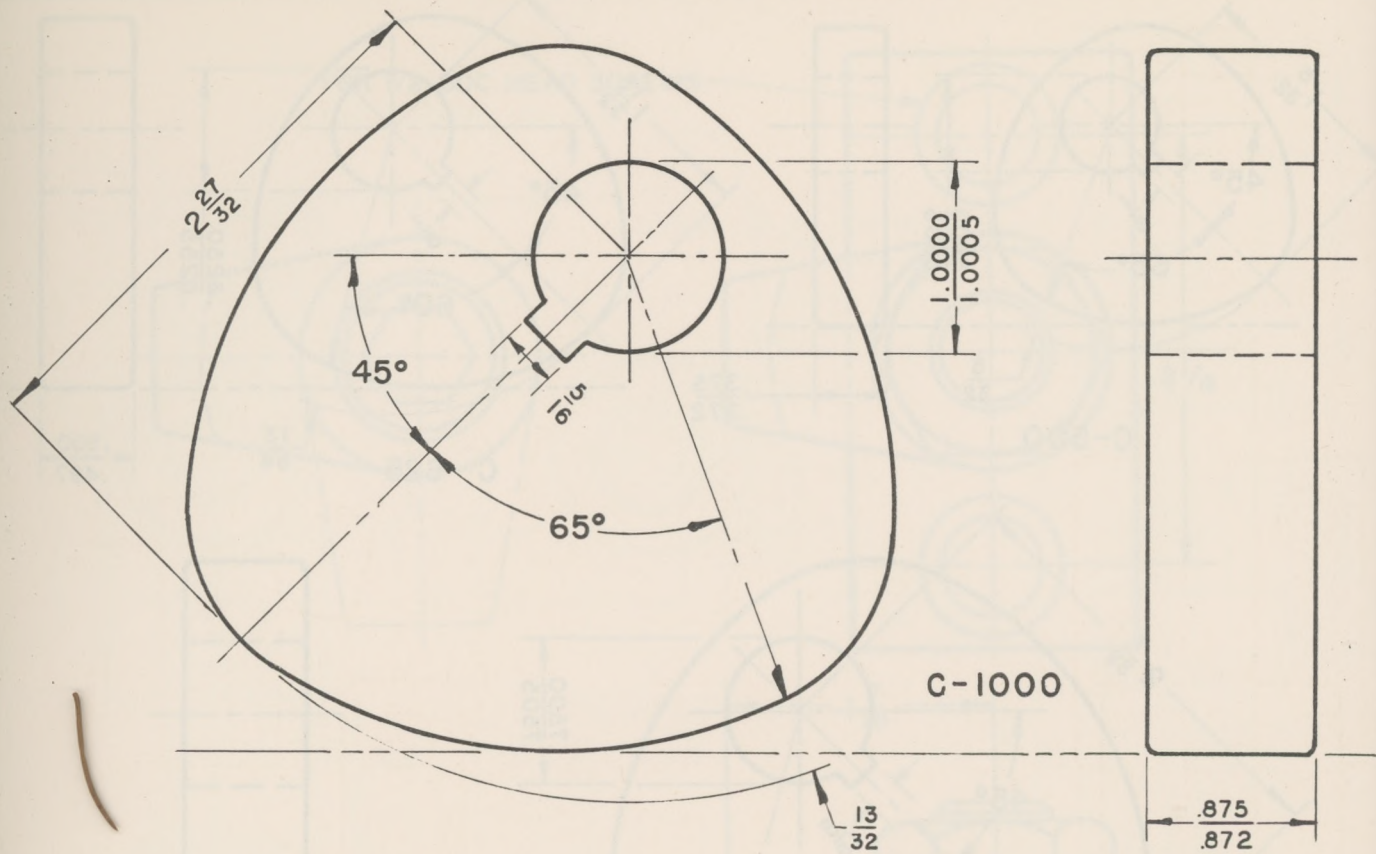
AHC-1126 (WITHOUT BLOCK)

HOOK CLAMP ASSEMBLIES

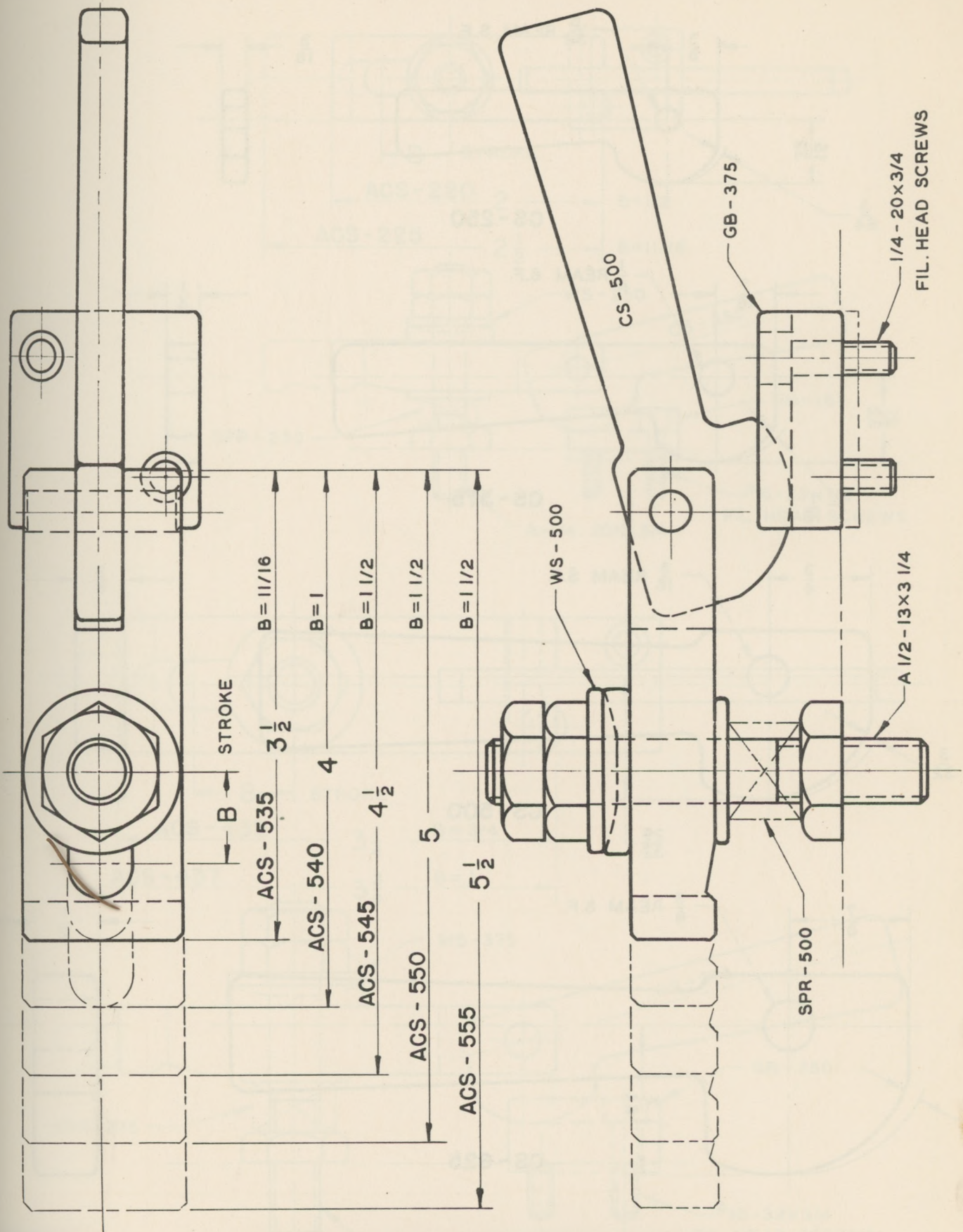


FIXTURE CAMS

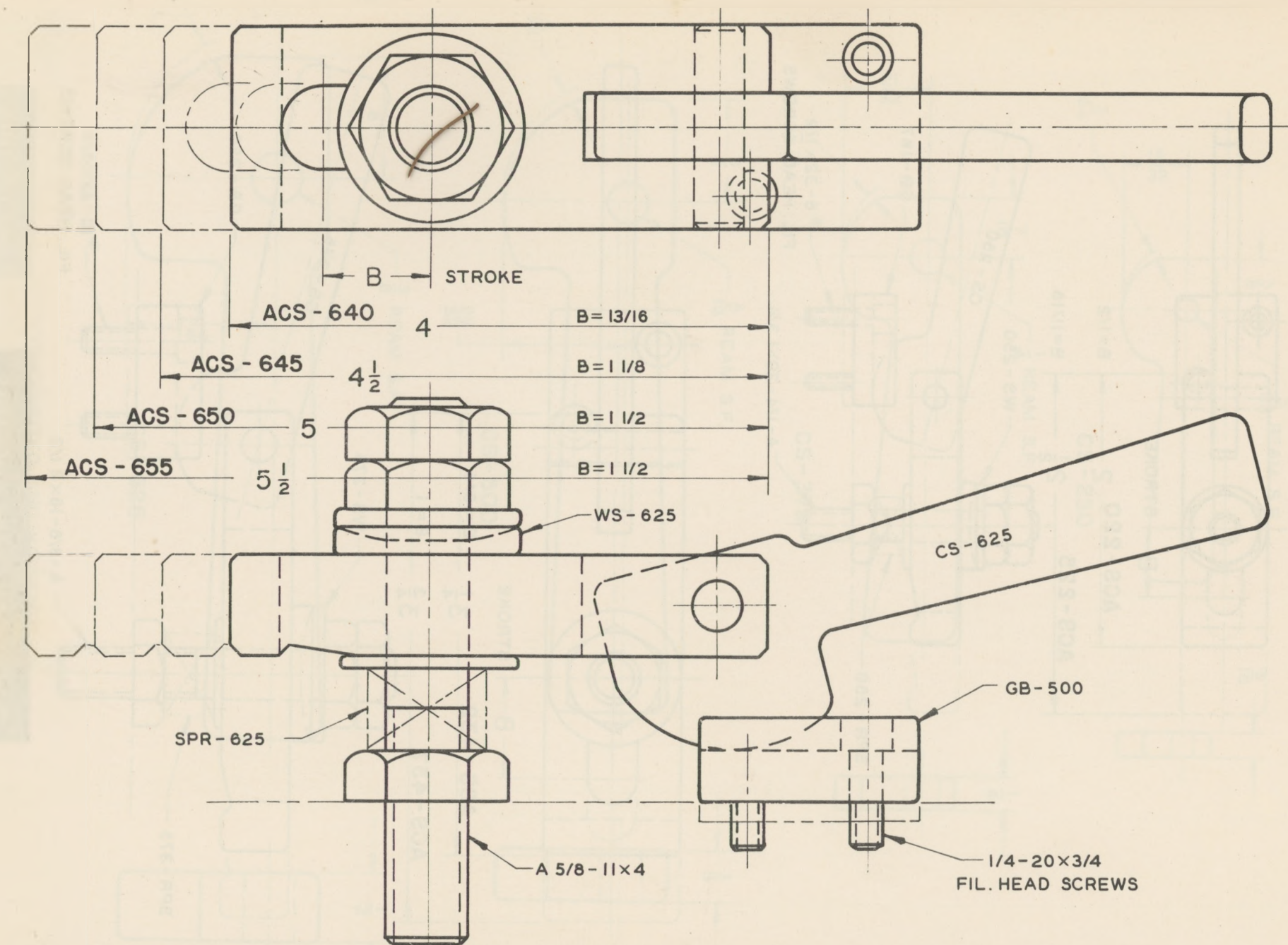
HARDENED AND GROUND
BLACK OXIDE FINISHED



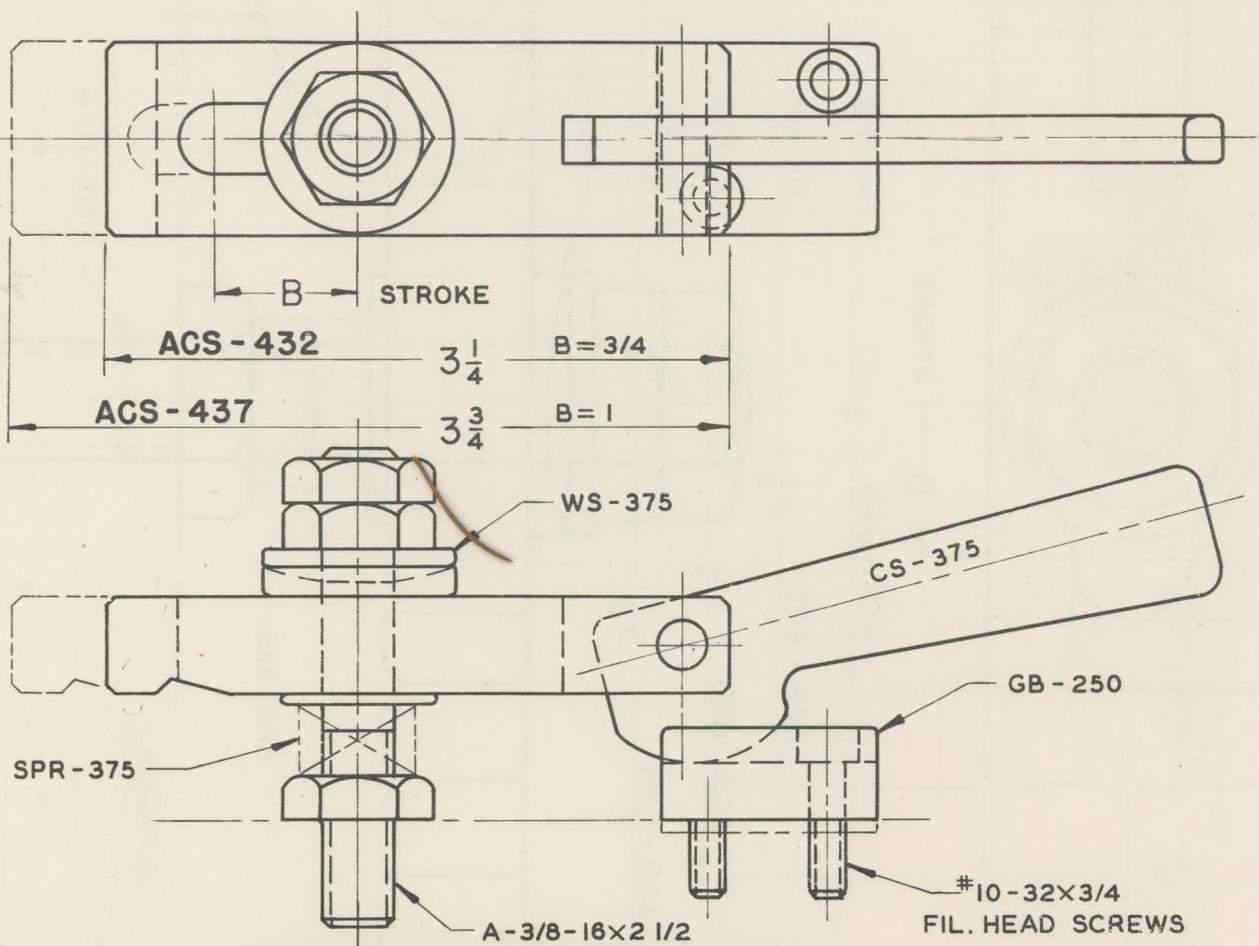
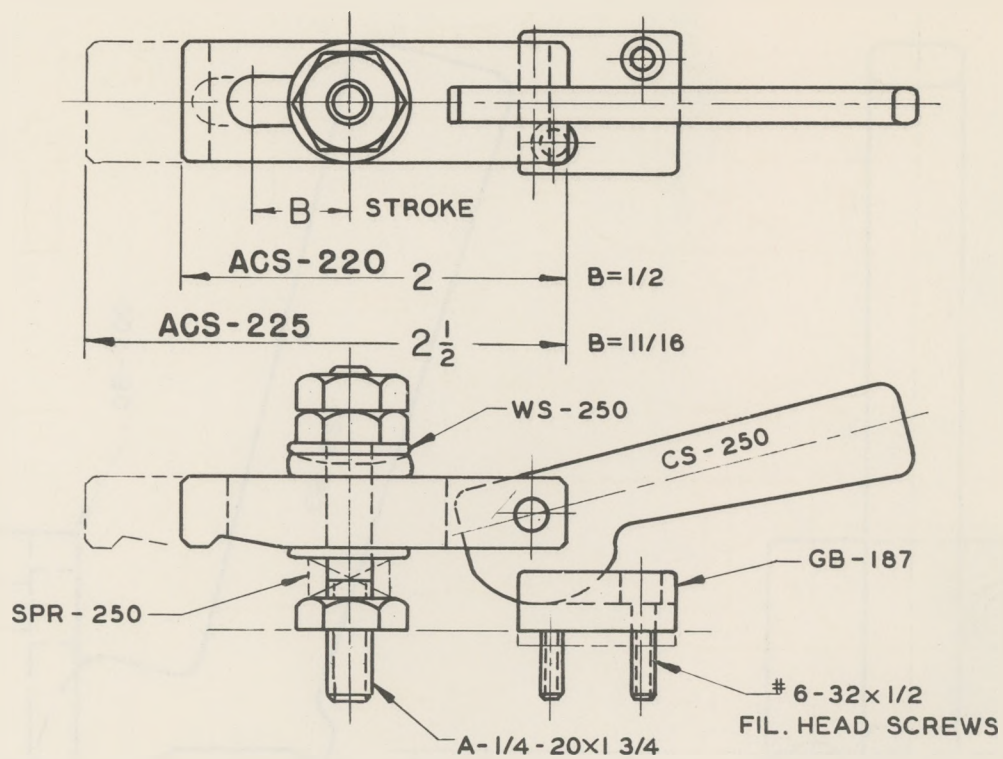
FIXTURE CAMS



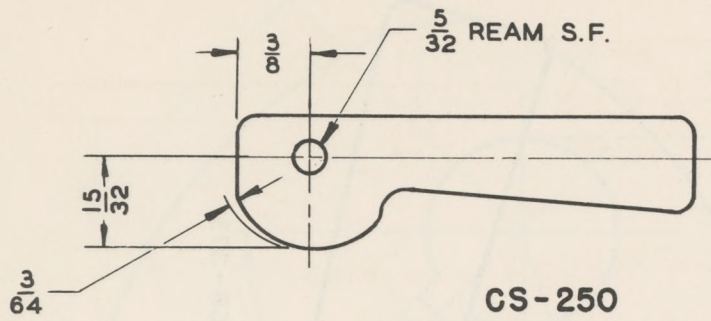
SINGLE CAM CLAMP ASSEMBLIES



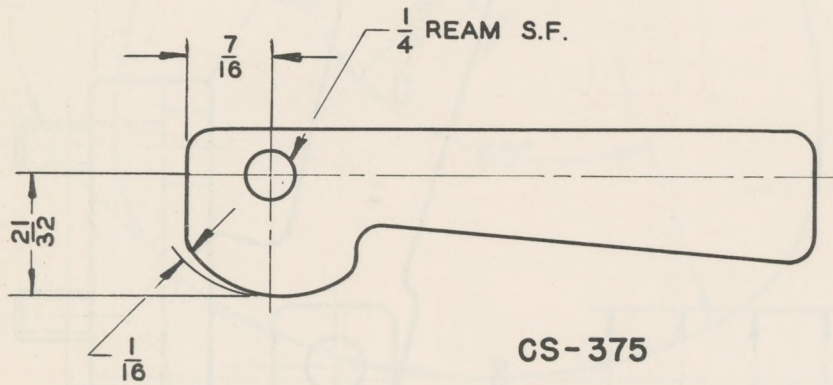
B STROKE



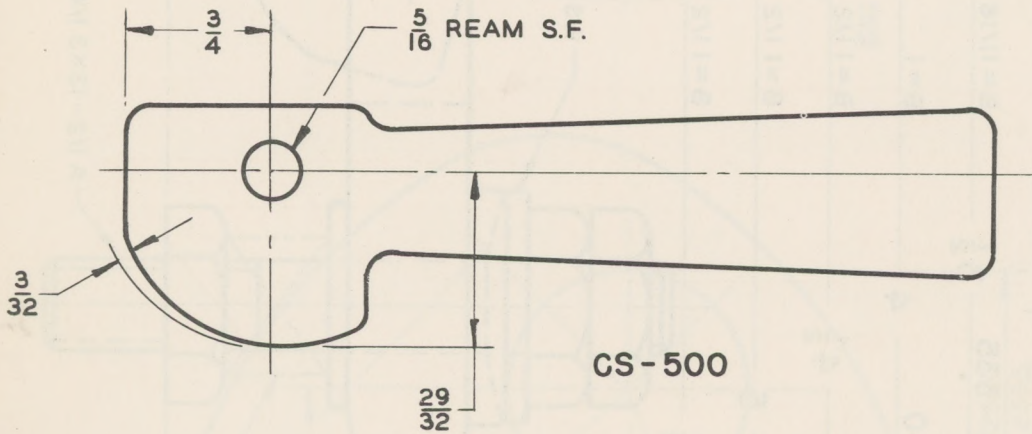
SINGLE CAM CLAMP ASSEMBLIES



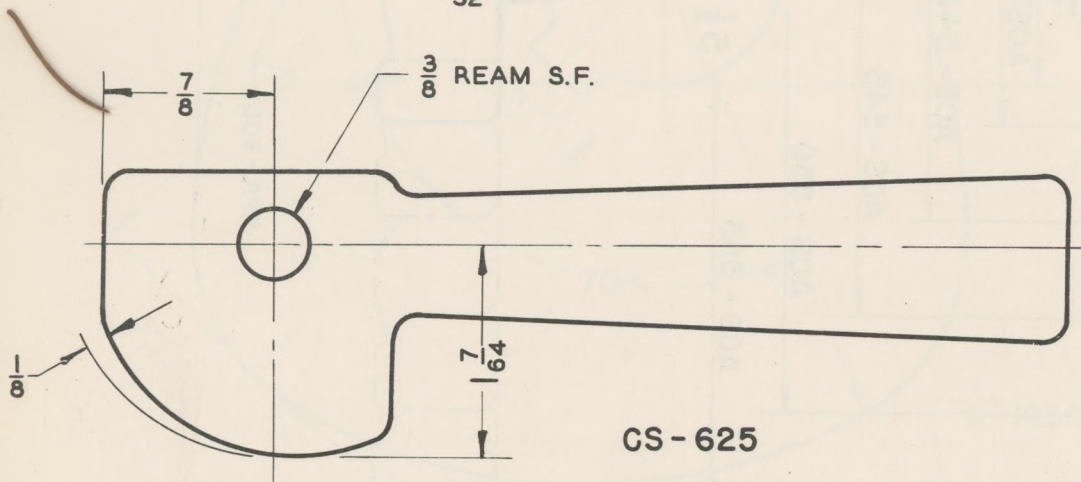
CS-250



CS-375



CS-500



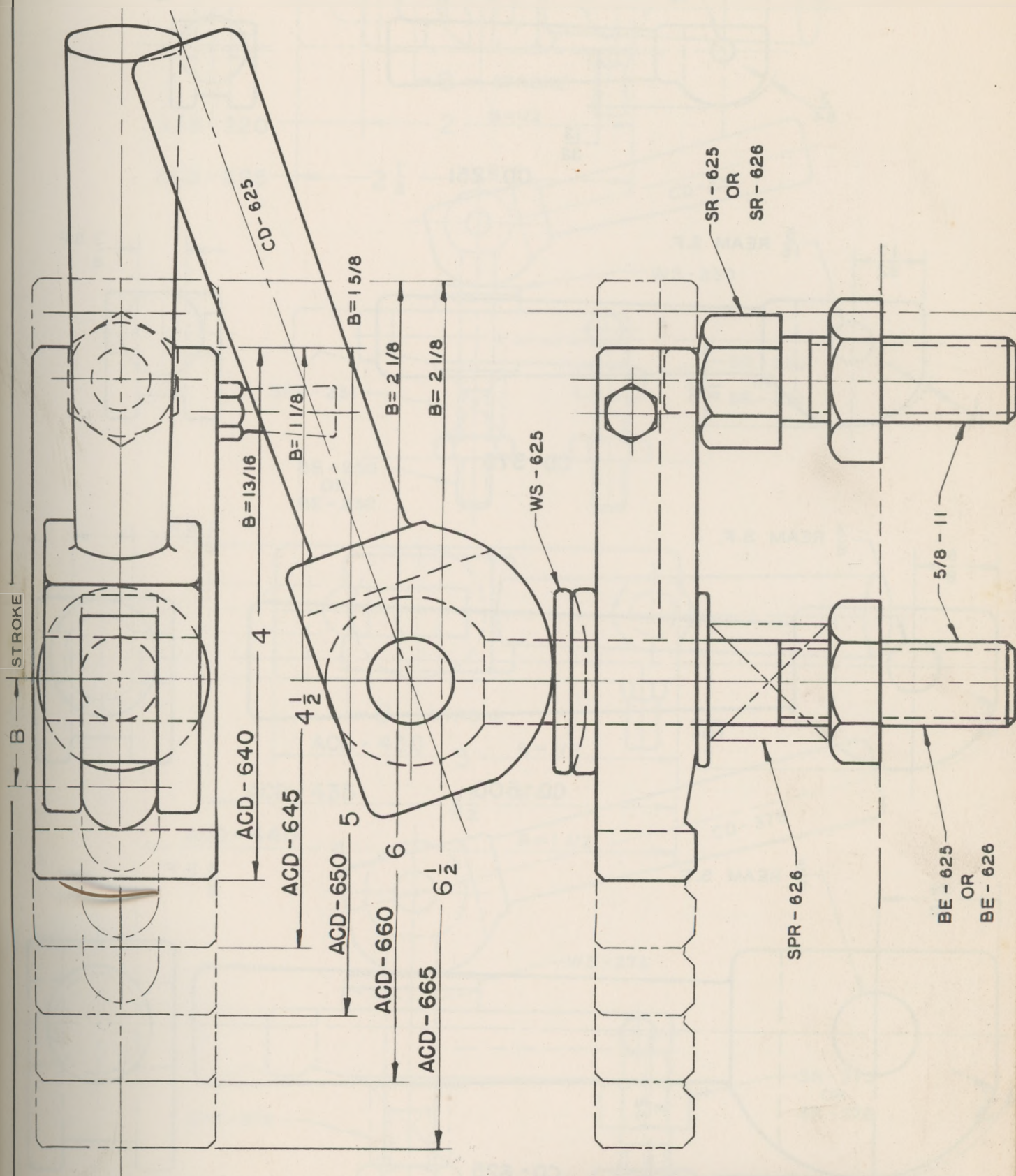
CS-625

SINGLE CAMS

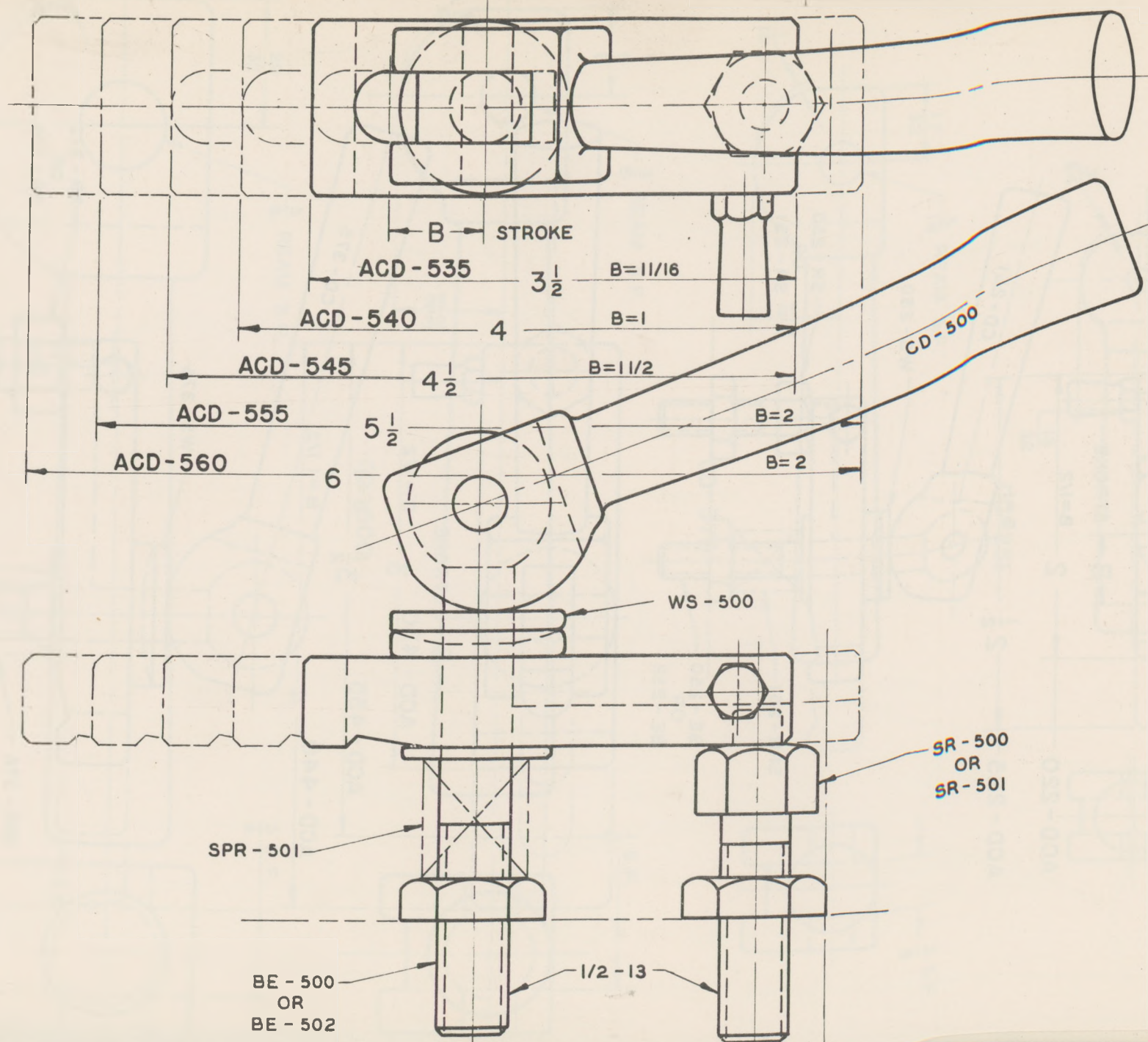
CARBURIZED AND HARDENED
BLACK OXIDE FINISH

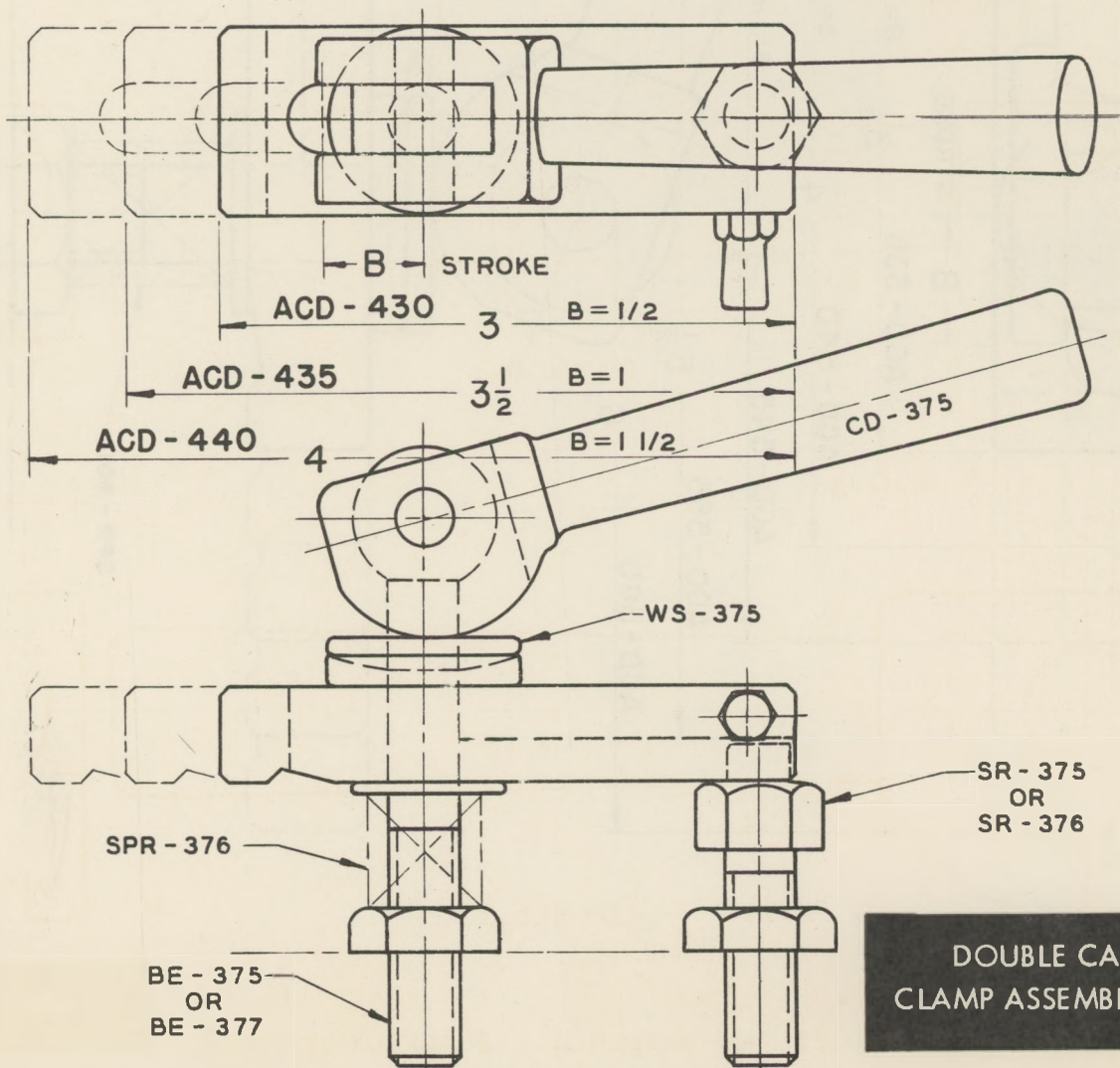
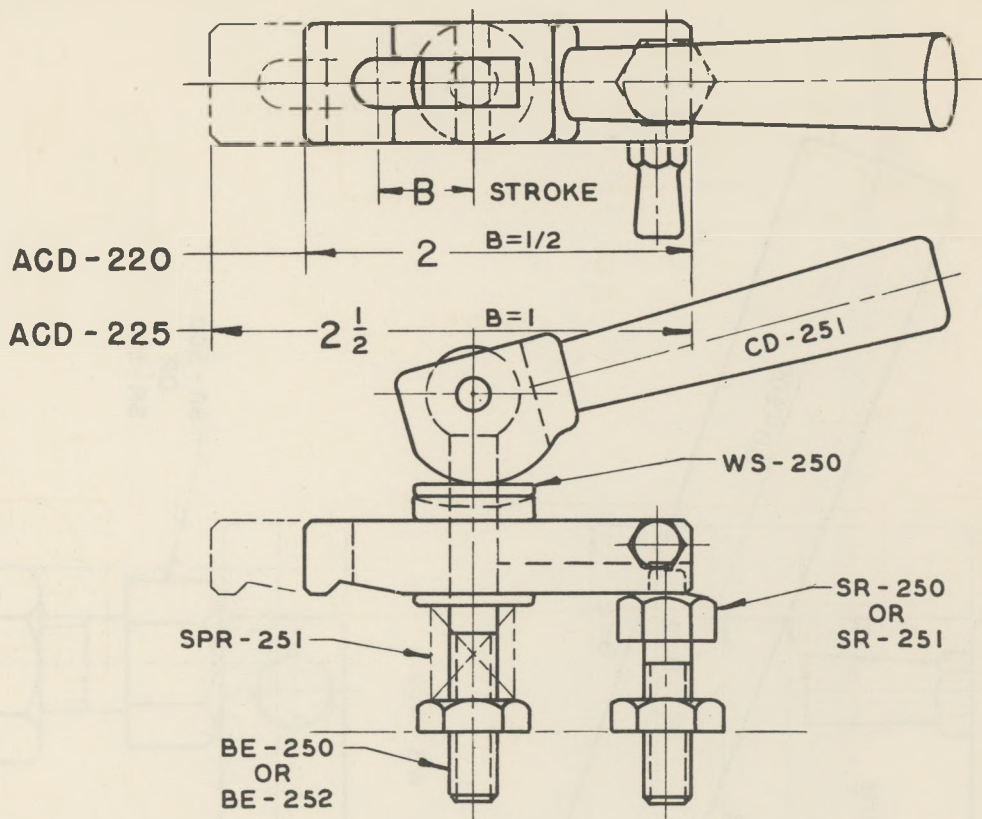
STROKE

B

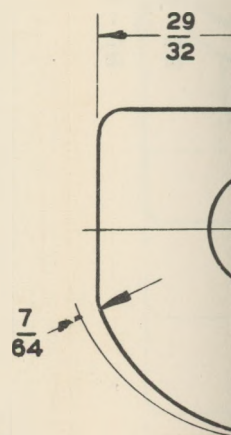
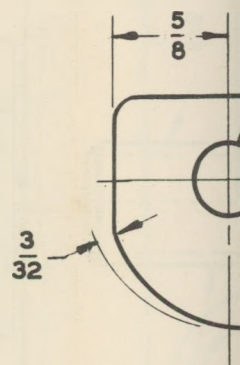


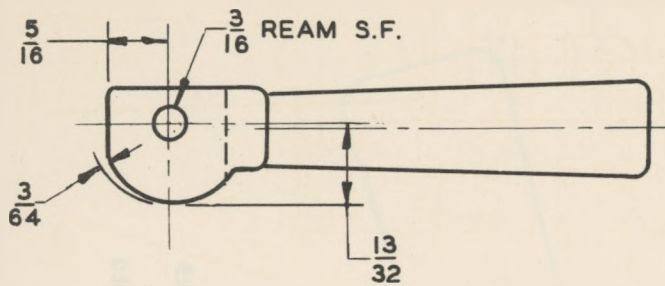
DOUBLE CAM CLAMP ASSEMBLIES



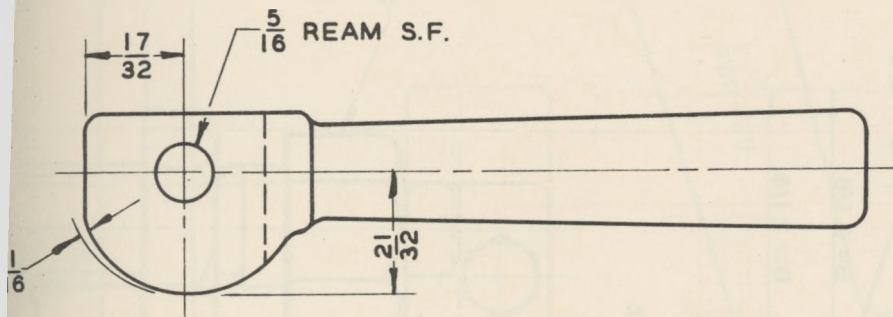
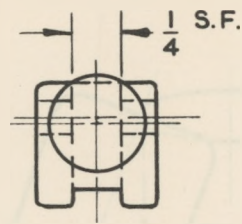


DOUBLE CAM
CLAMP ASSEMBLIES

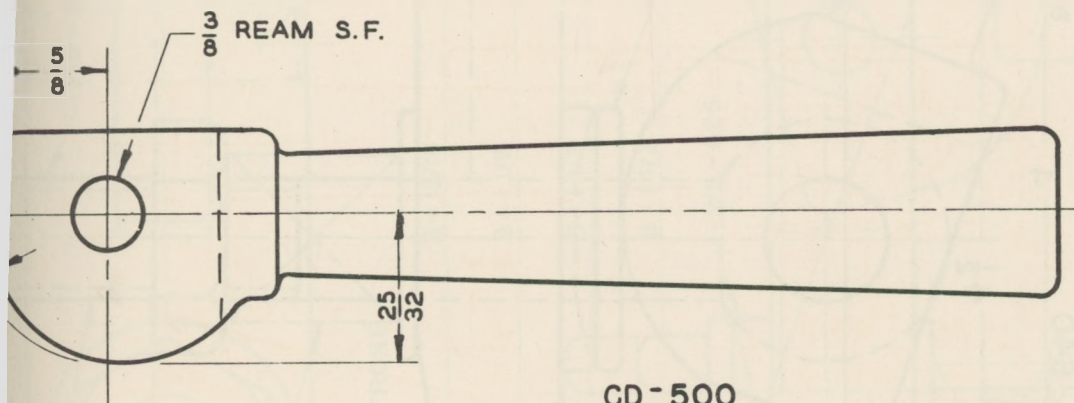
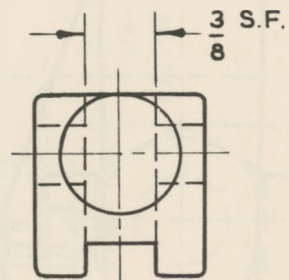




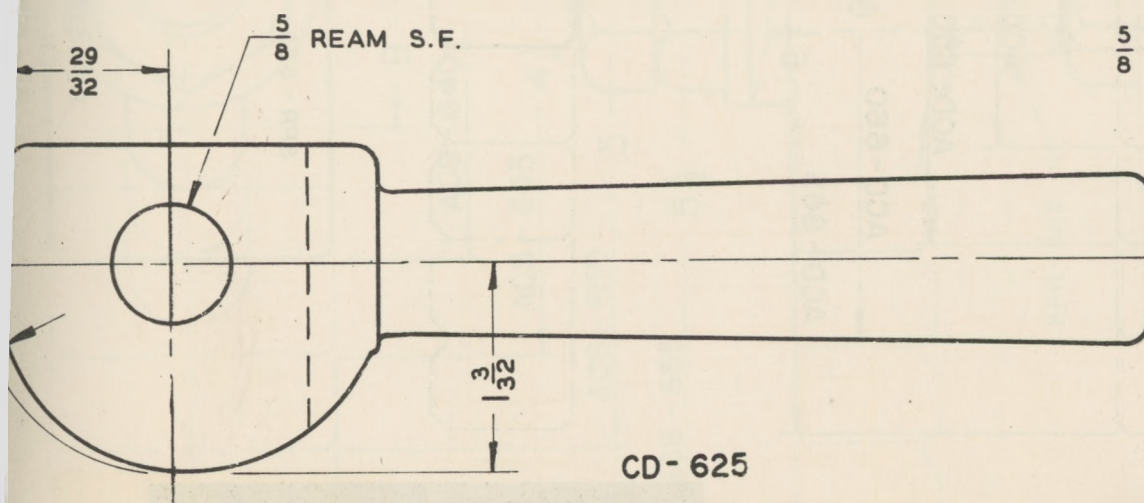
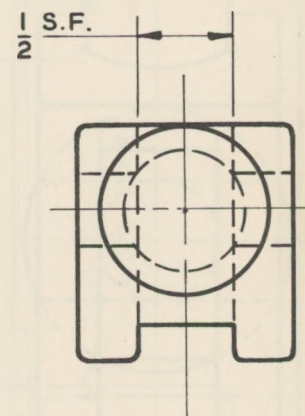
CD-251



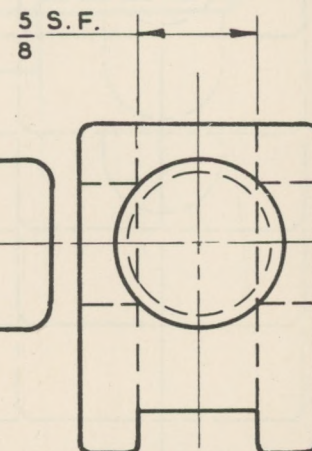
CD-375



CD-500

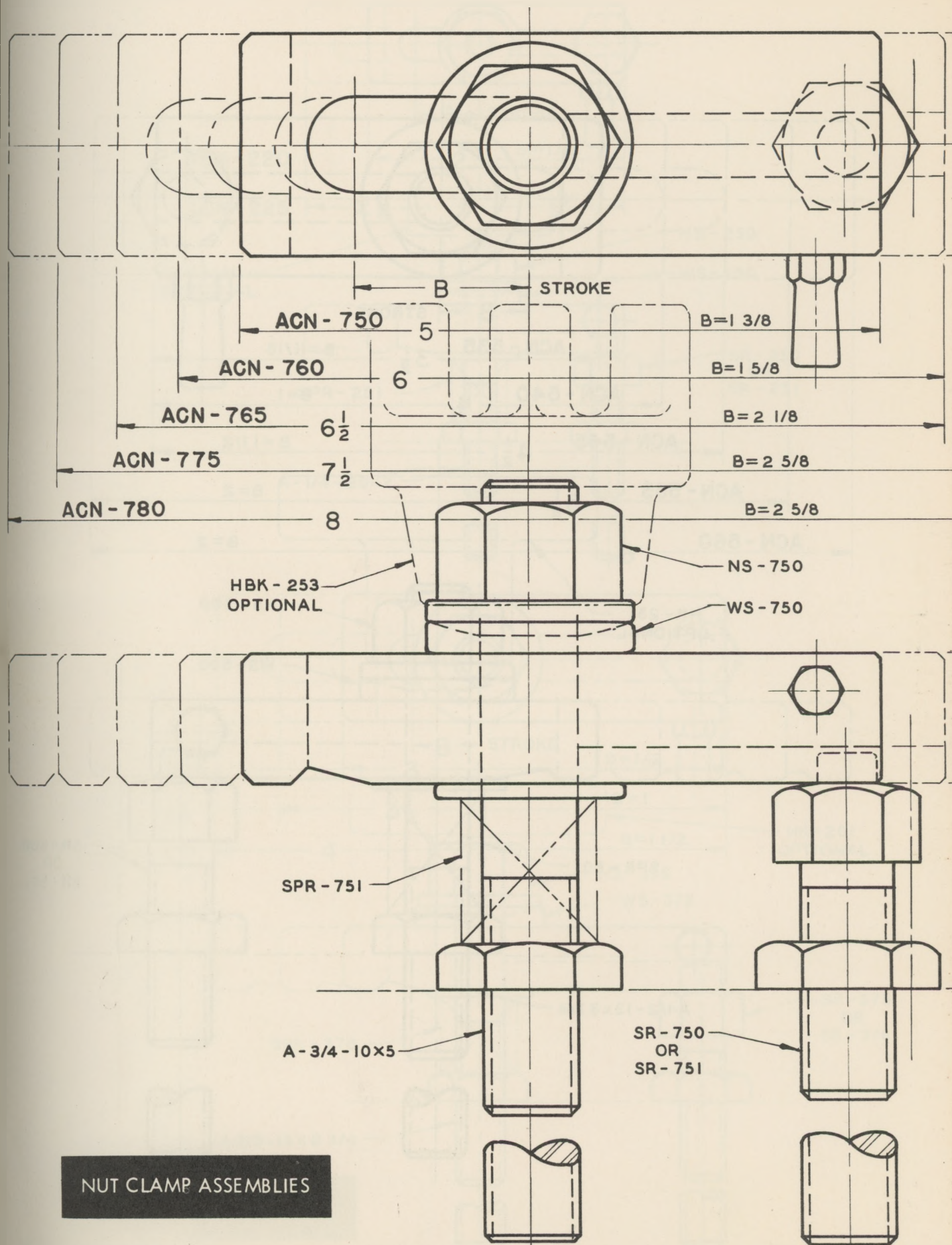


CD-625

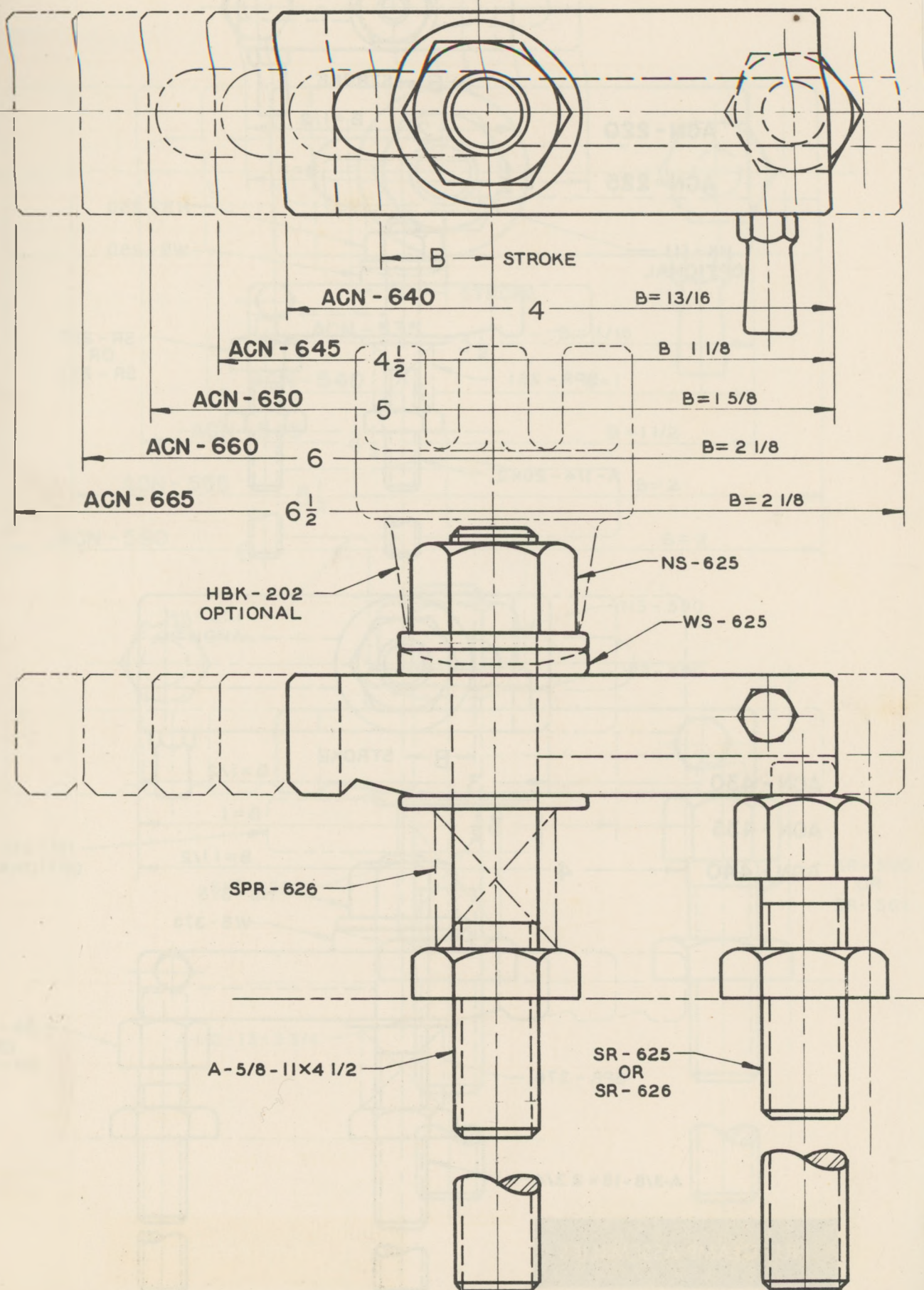


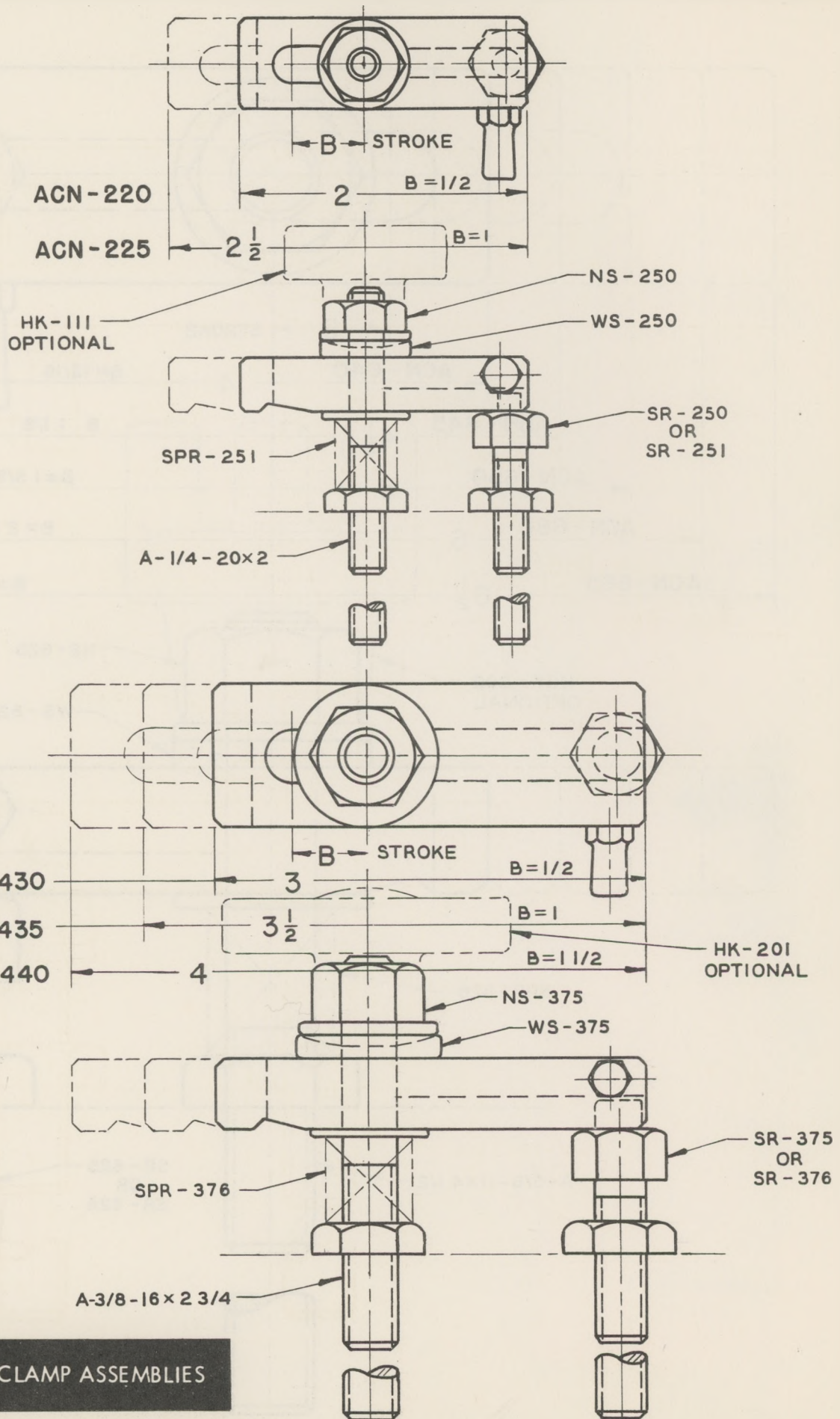
DOUBLE CAMS

CARBURIZED AND HARDENED - BLACK OXIDE FINISH

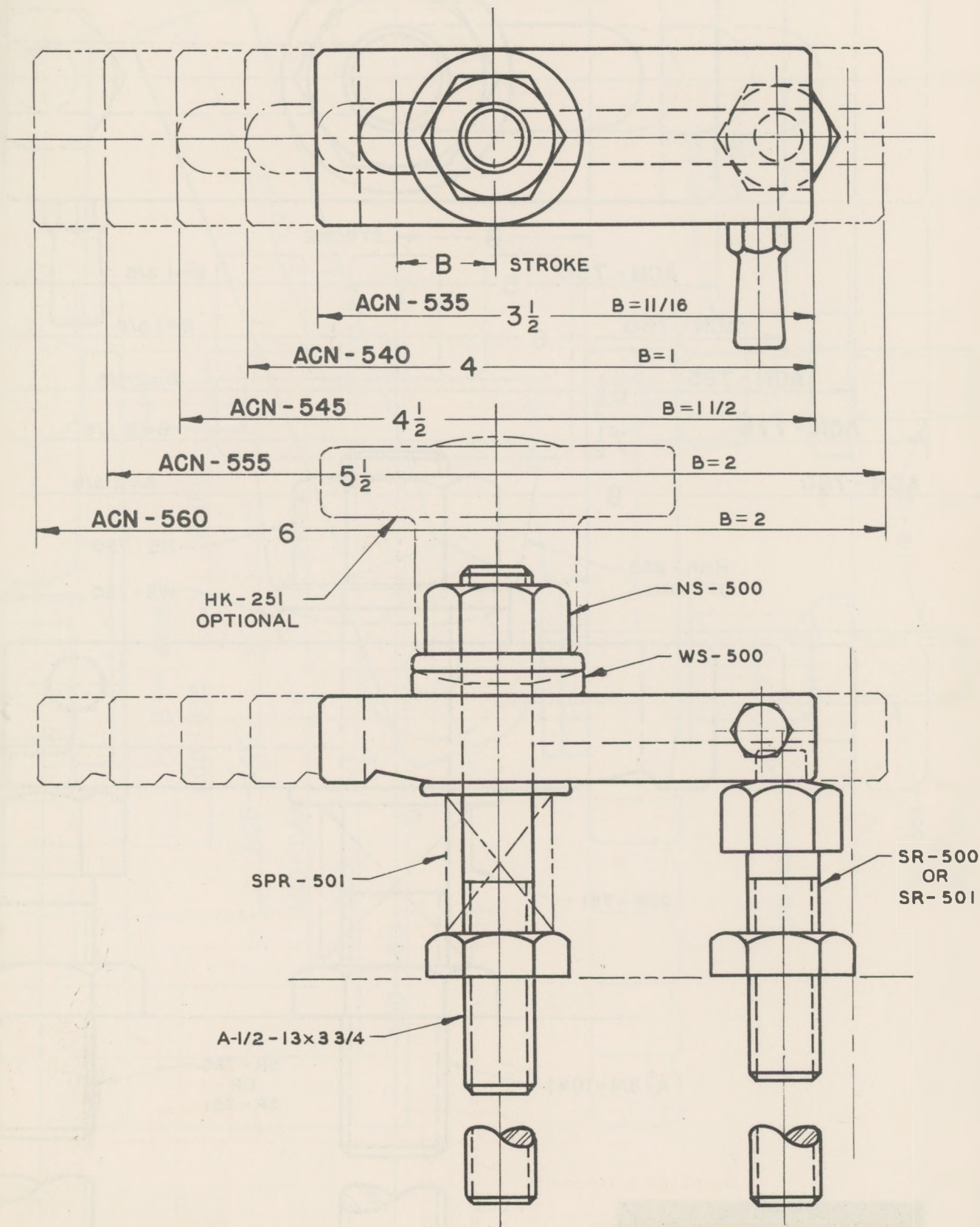


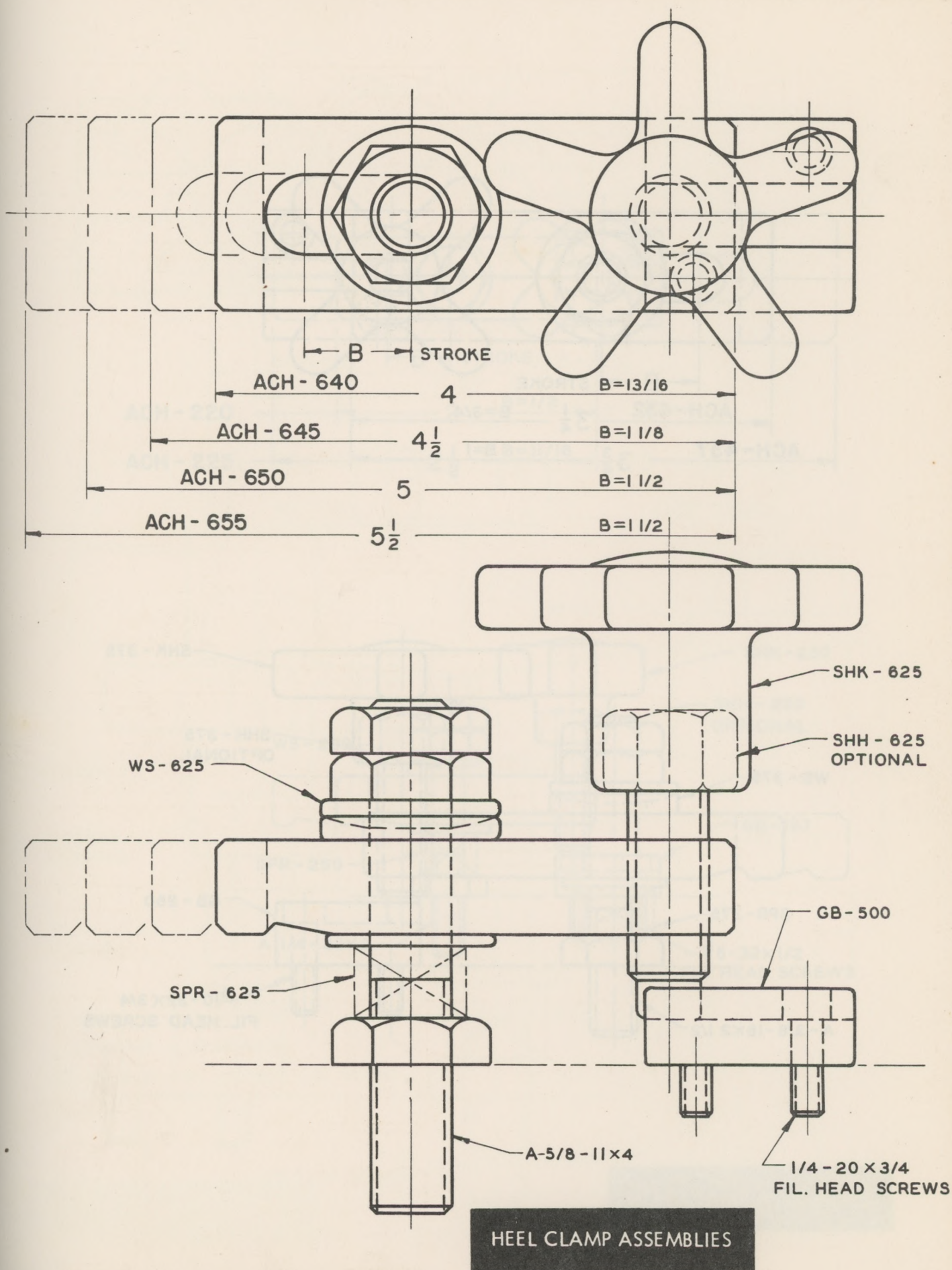
NUT CLAMP ASSEMBLIES

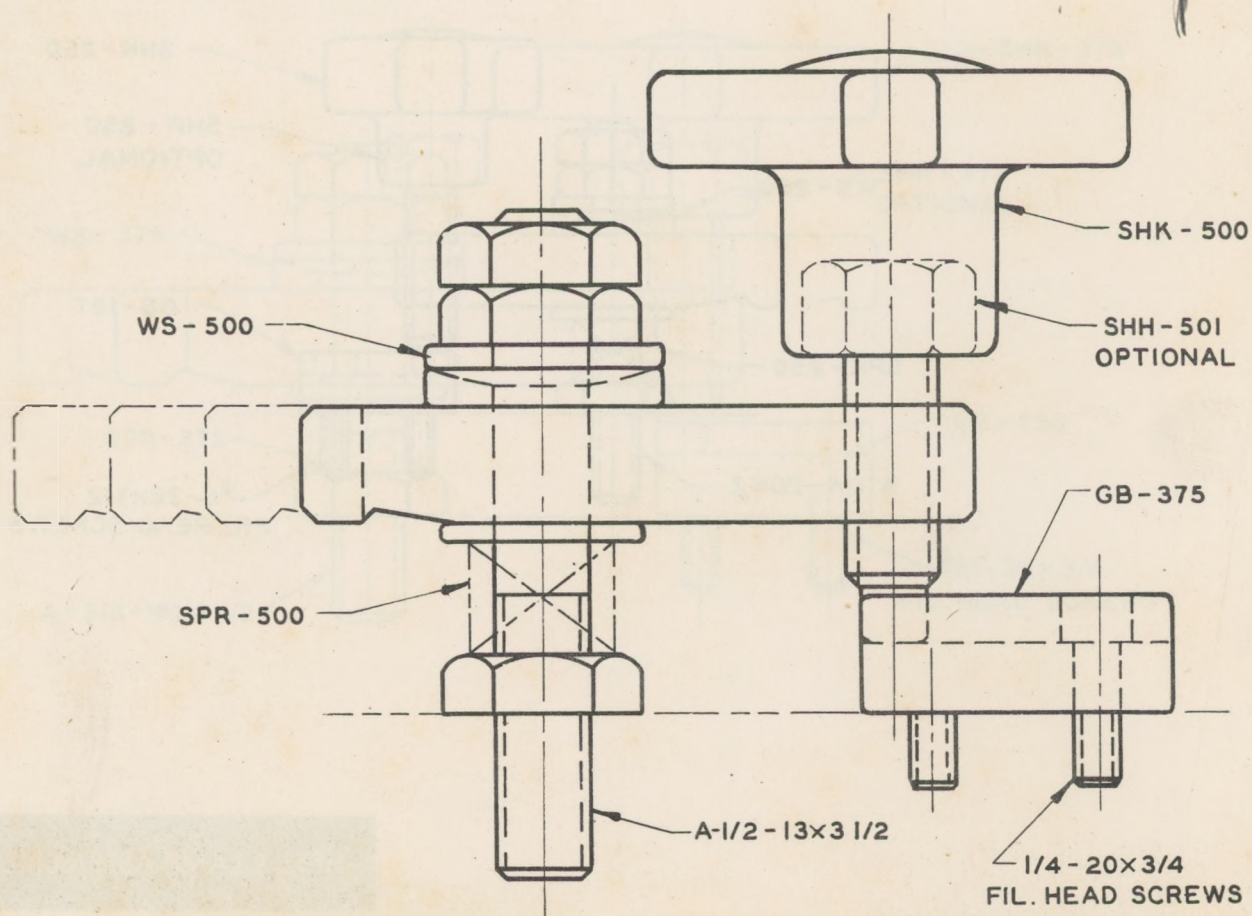
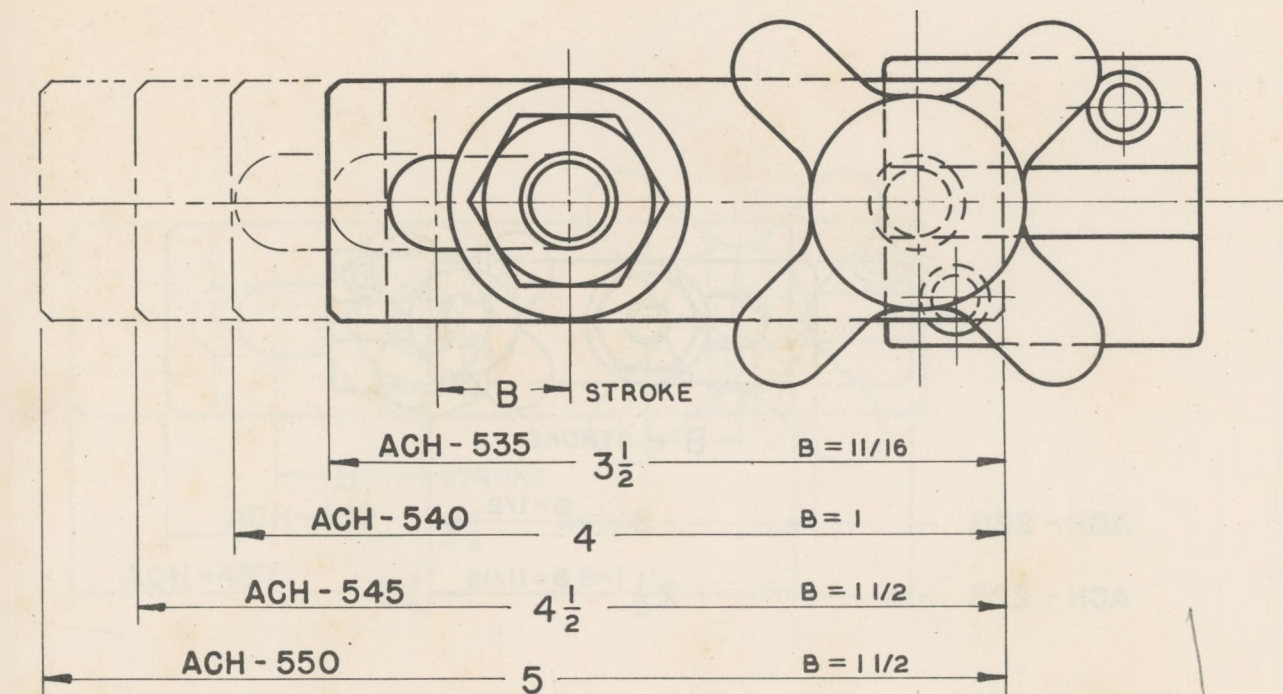


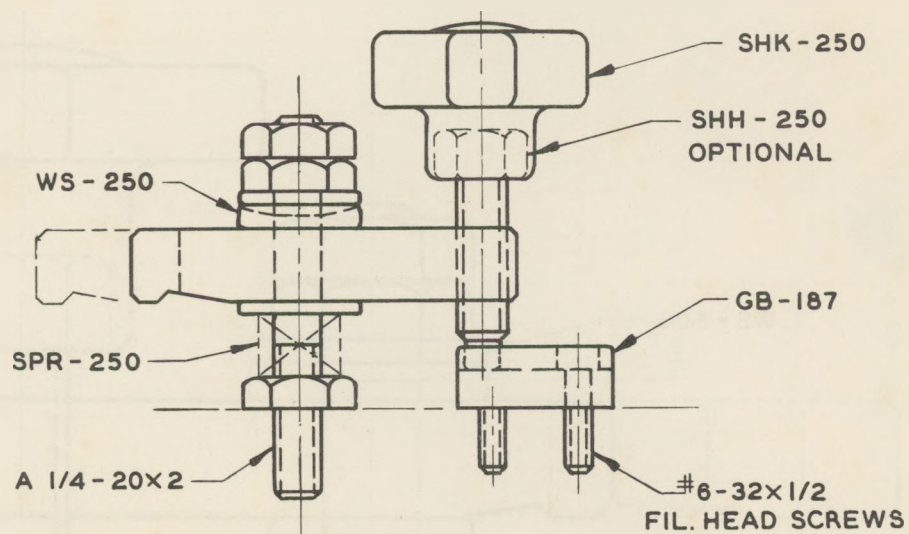
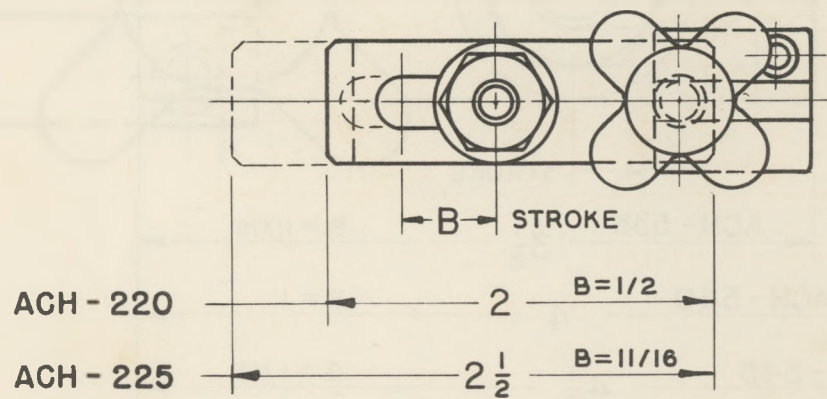


NUT CLAMP ASSEMBLIES

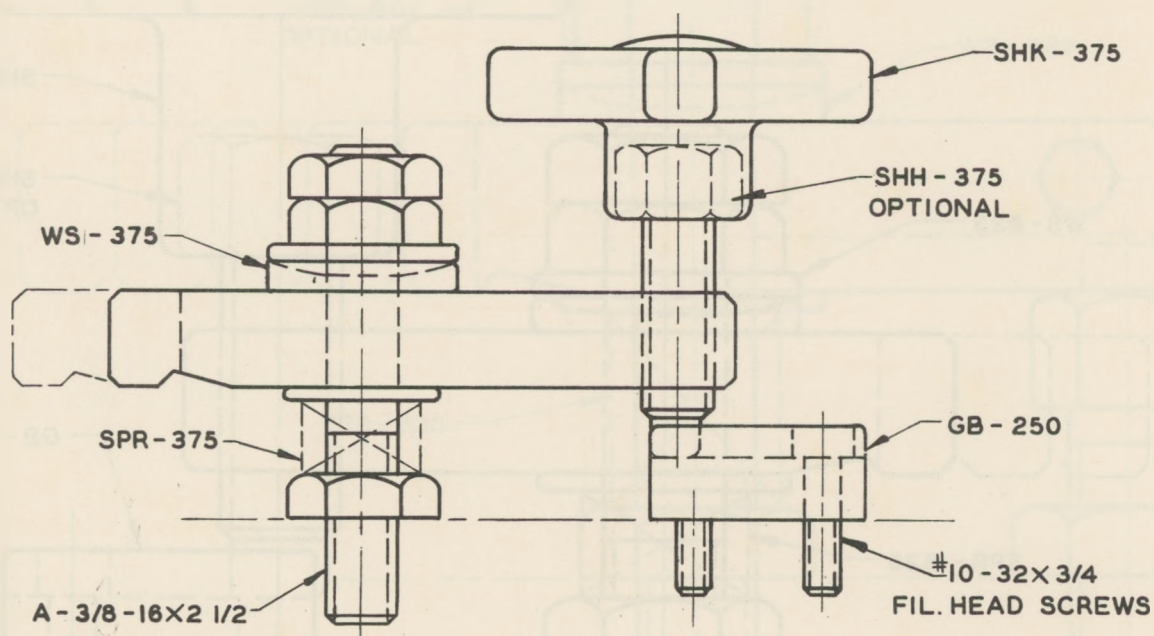
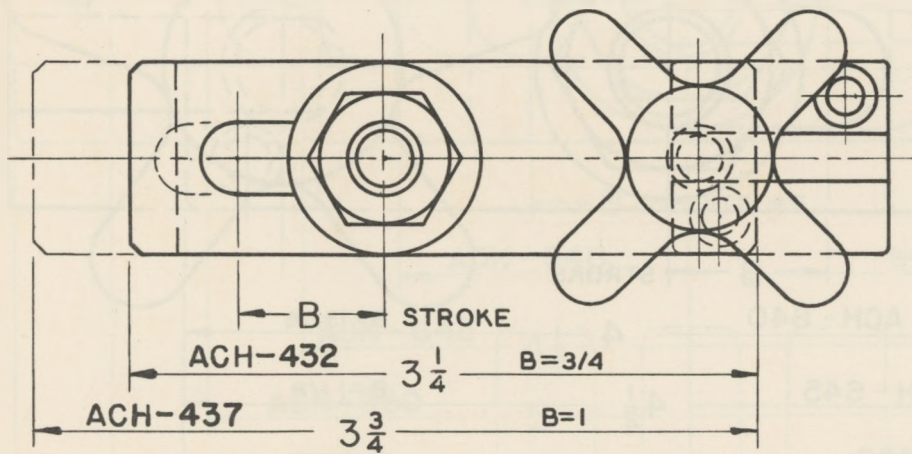


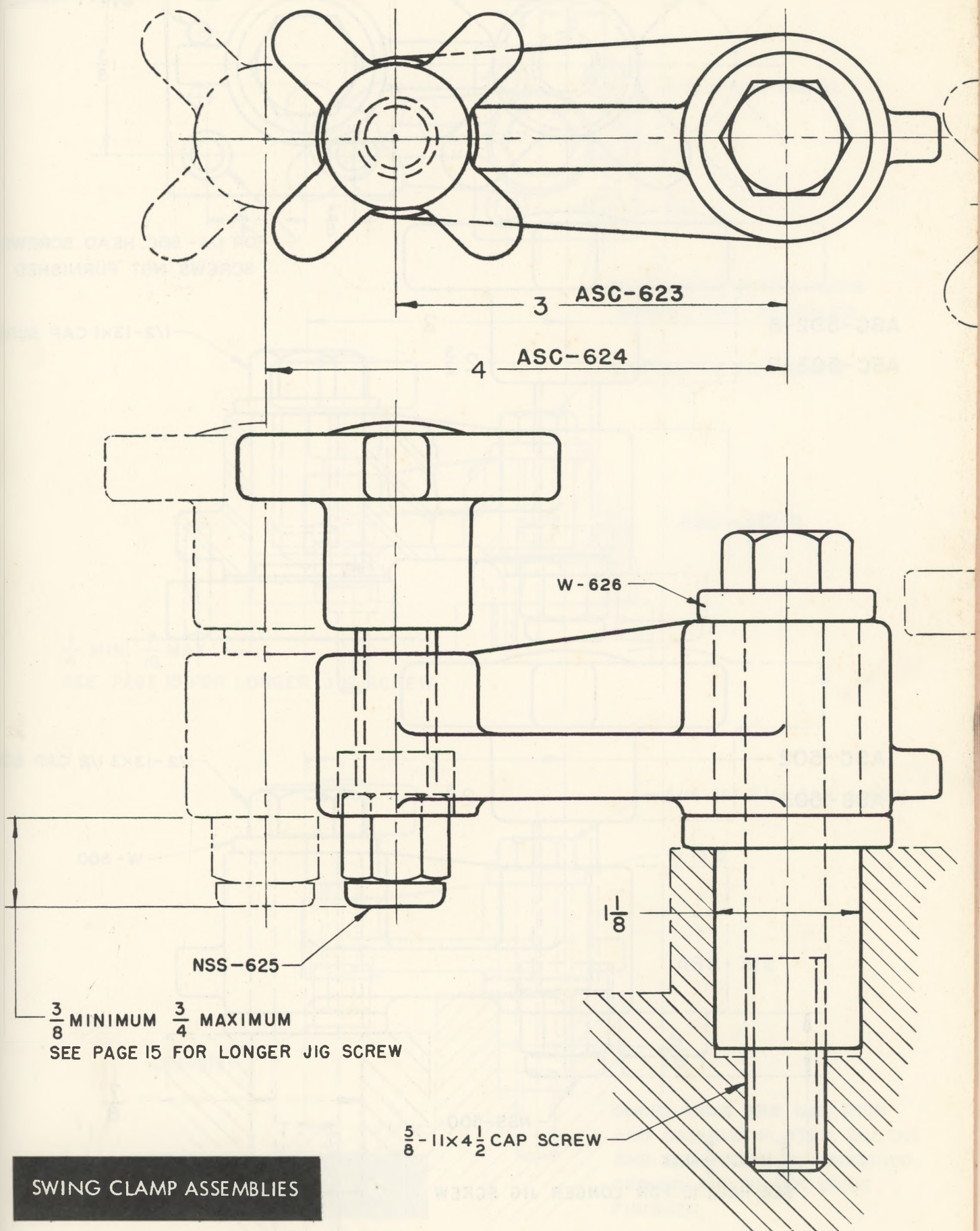


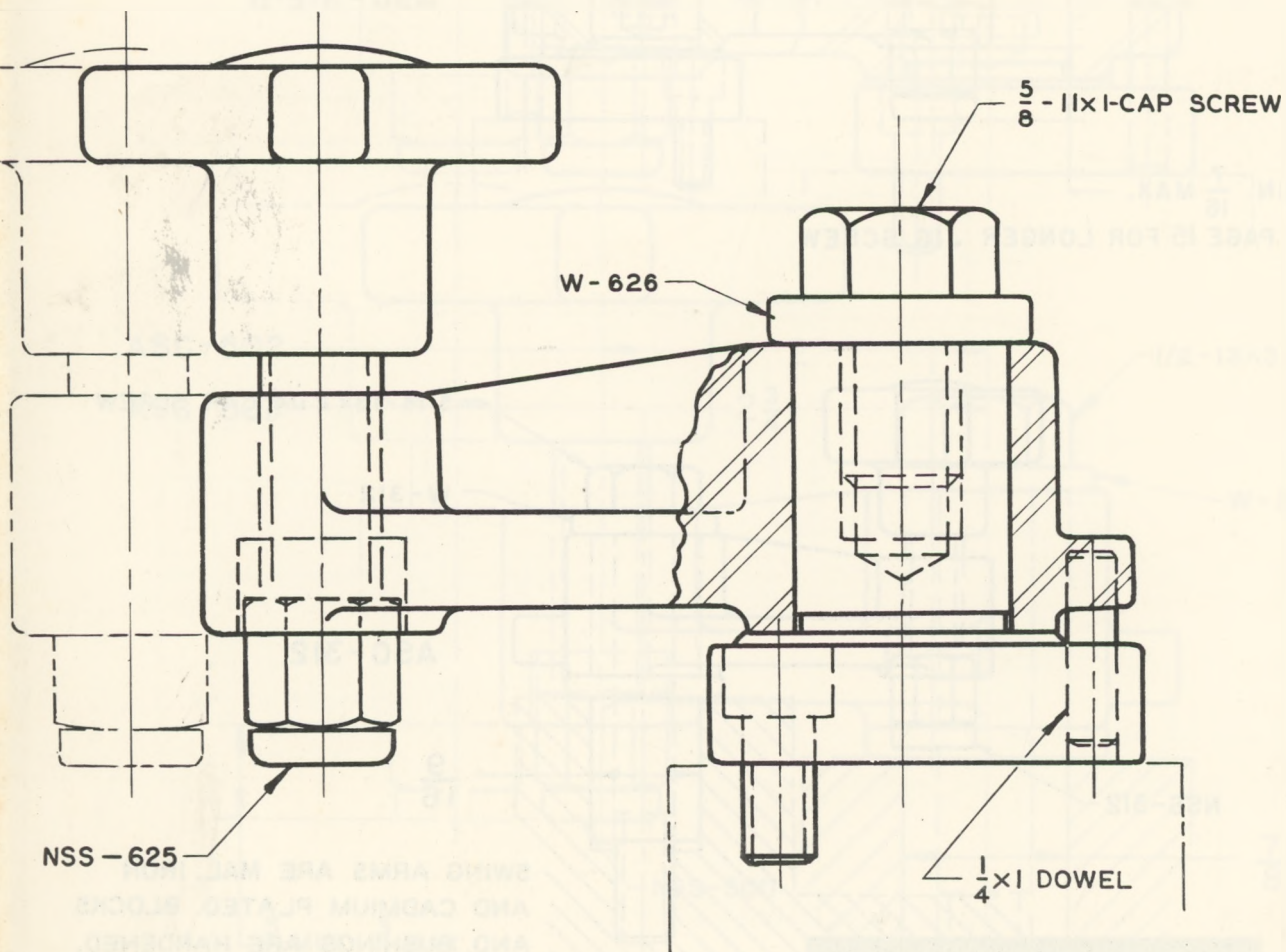
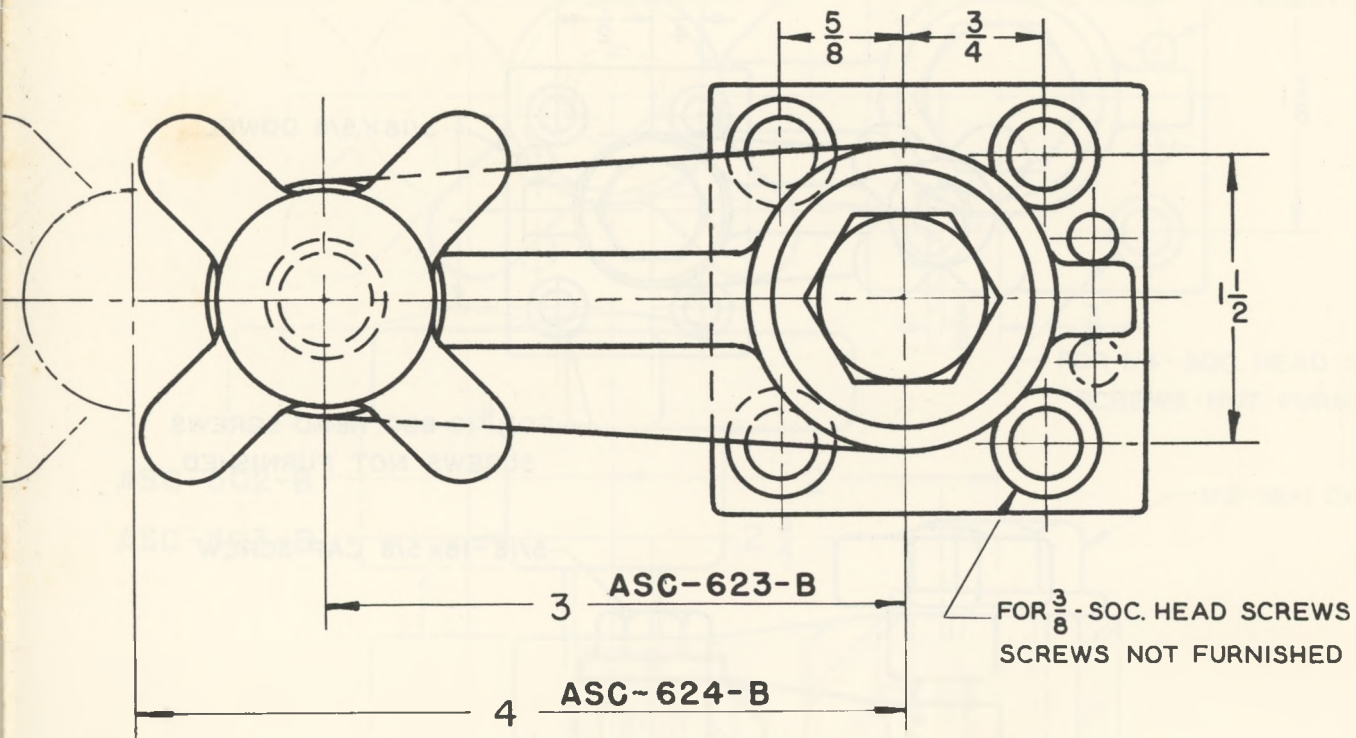




HEEL CLAMP ASSEMBLIES







W

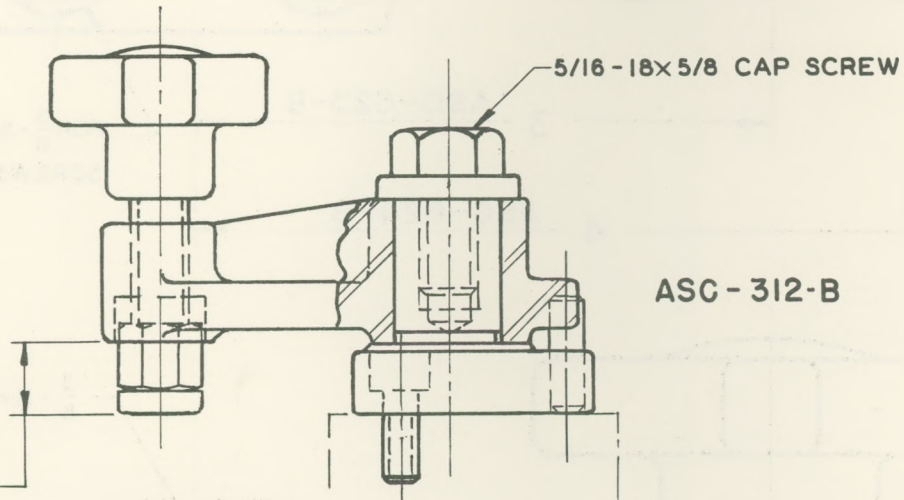
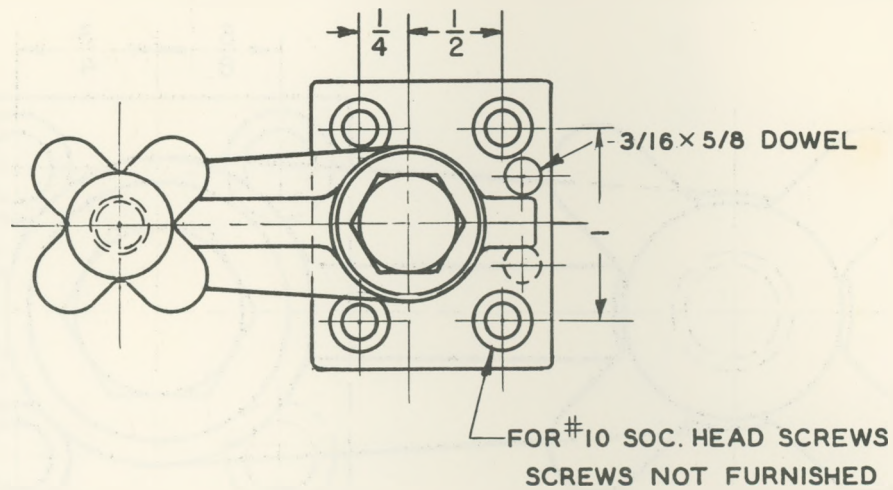
AC

CL-770

E

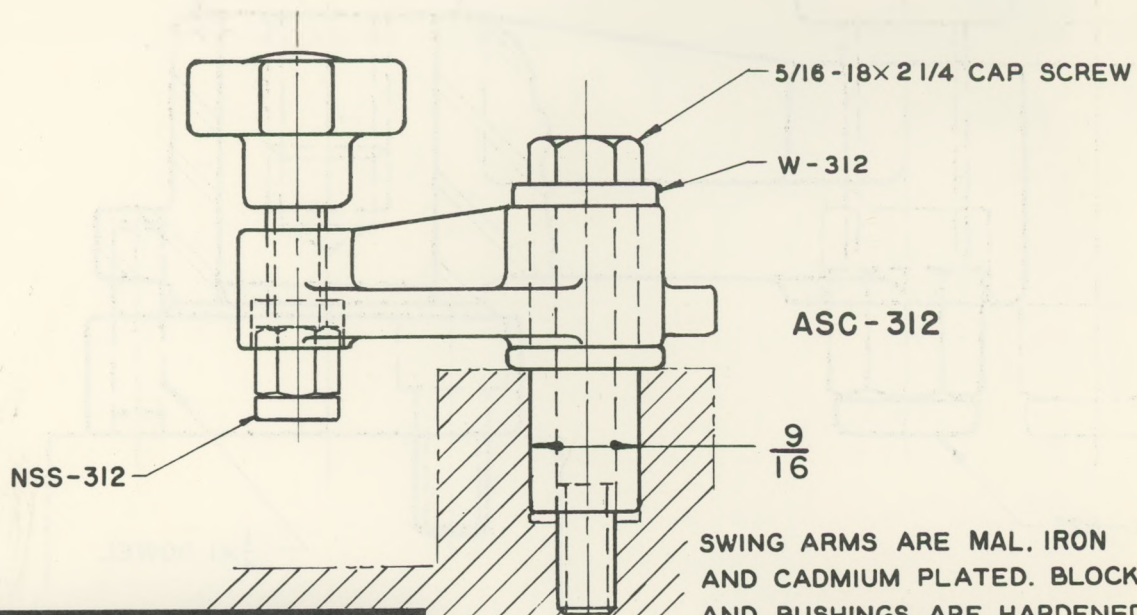
1/8

M



ASC - 312-B

$\frac{1}{4}$ MIN. $\frac{7}{16}$ MAX.
SEE PAGE 15 FOR LONGER JIG SCREW



SWING CLAMP ASSEMBLIES

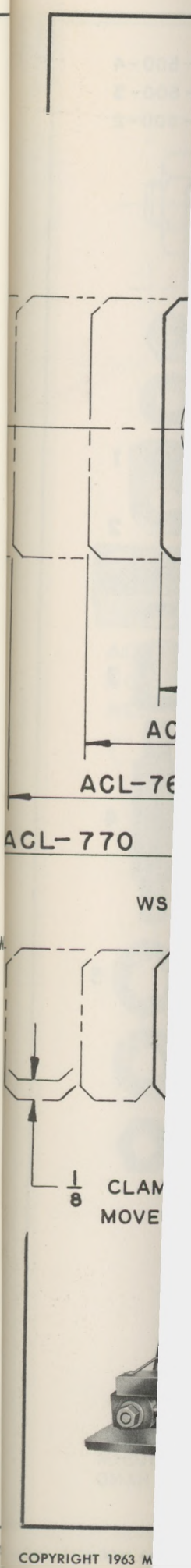
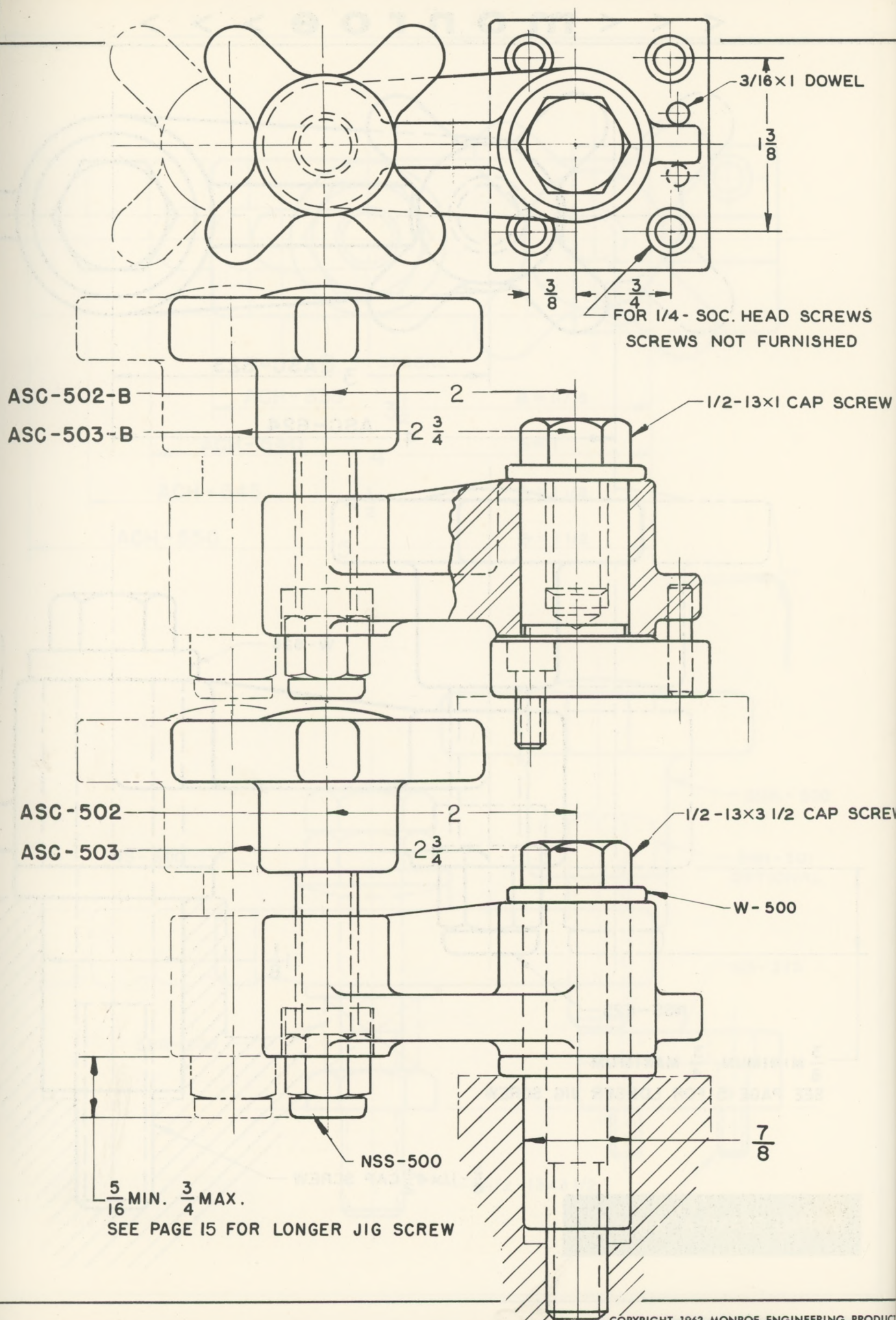
SWING ARMS ARE MAL. IRON
AND CADMIUM PLATED. BLOCKS
AND BUSHINGS ARE HARDENED,
GROUND AND BLACK OXIDE
FINISHED.

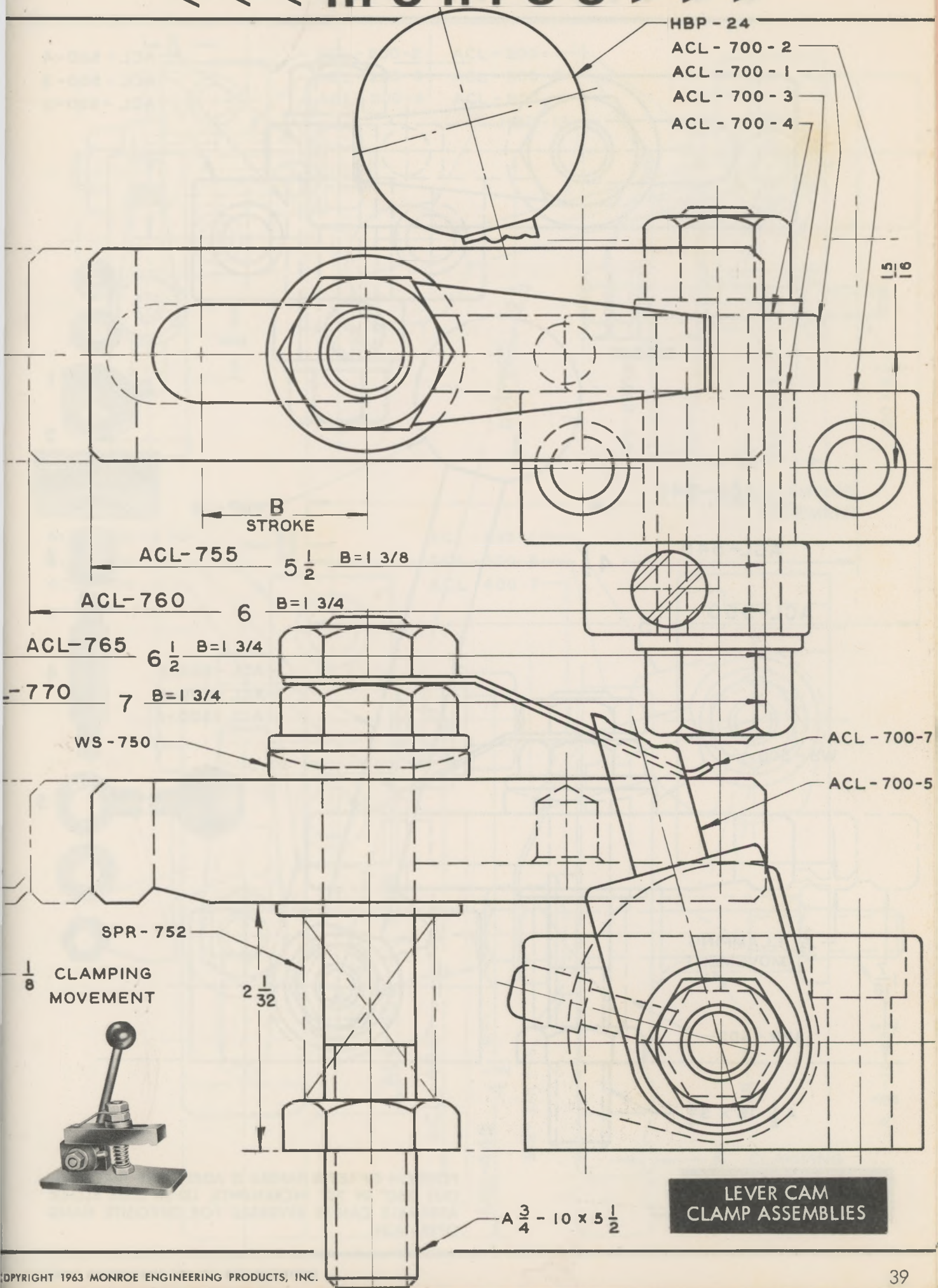
ASC-

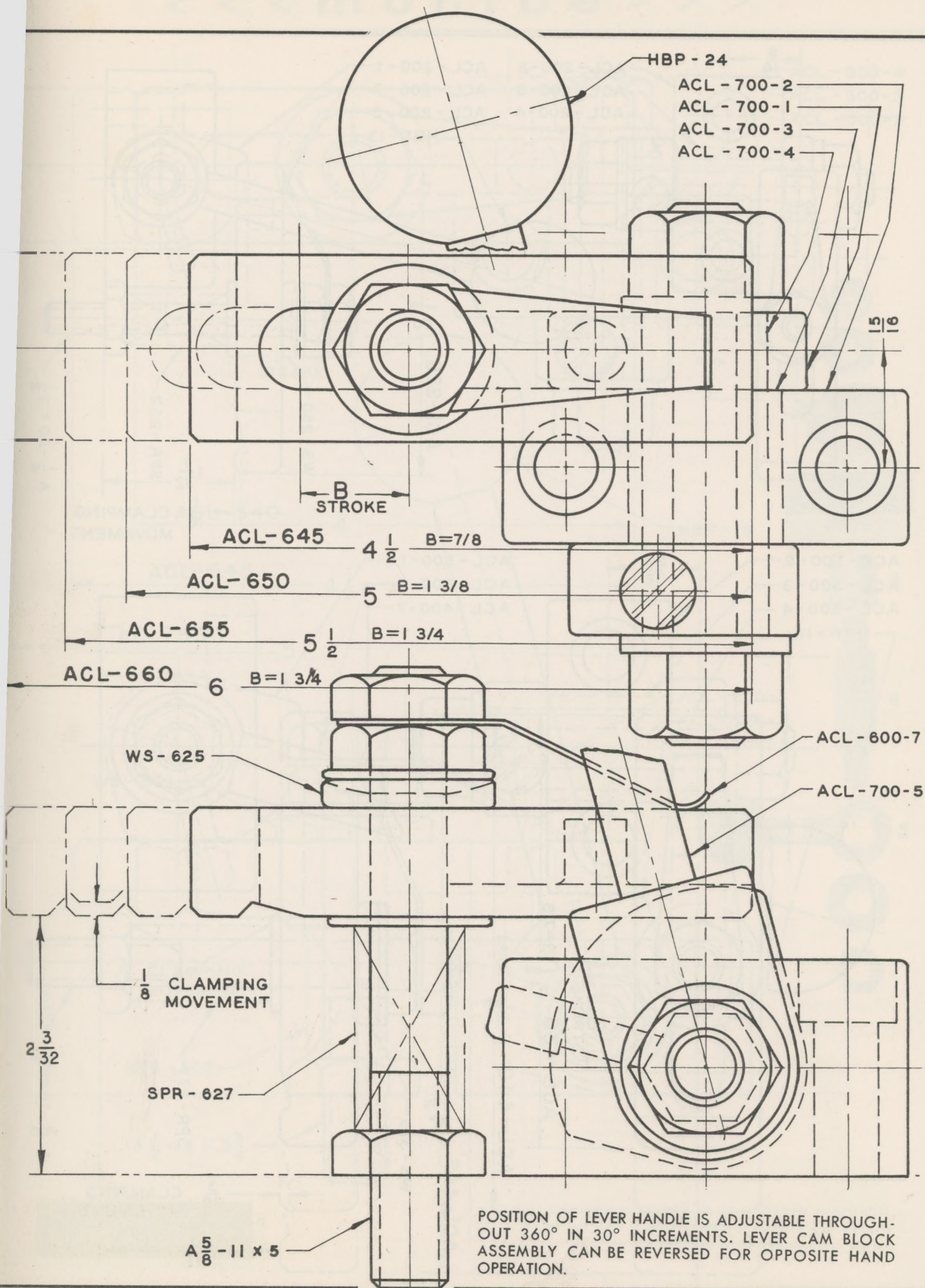
ASC-

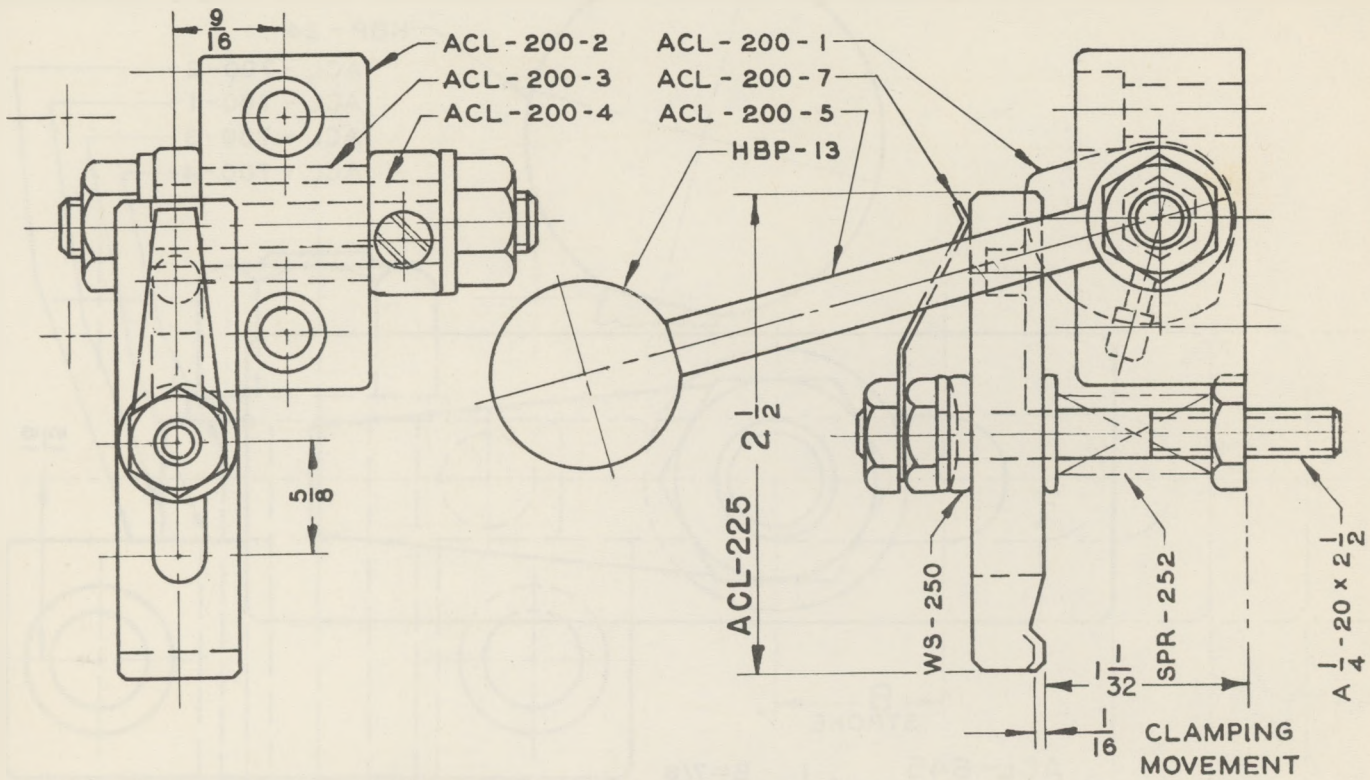
ASC

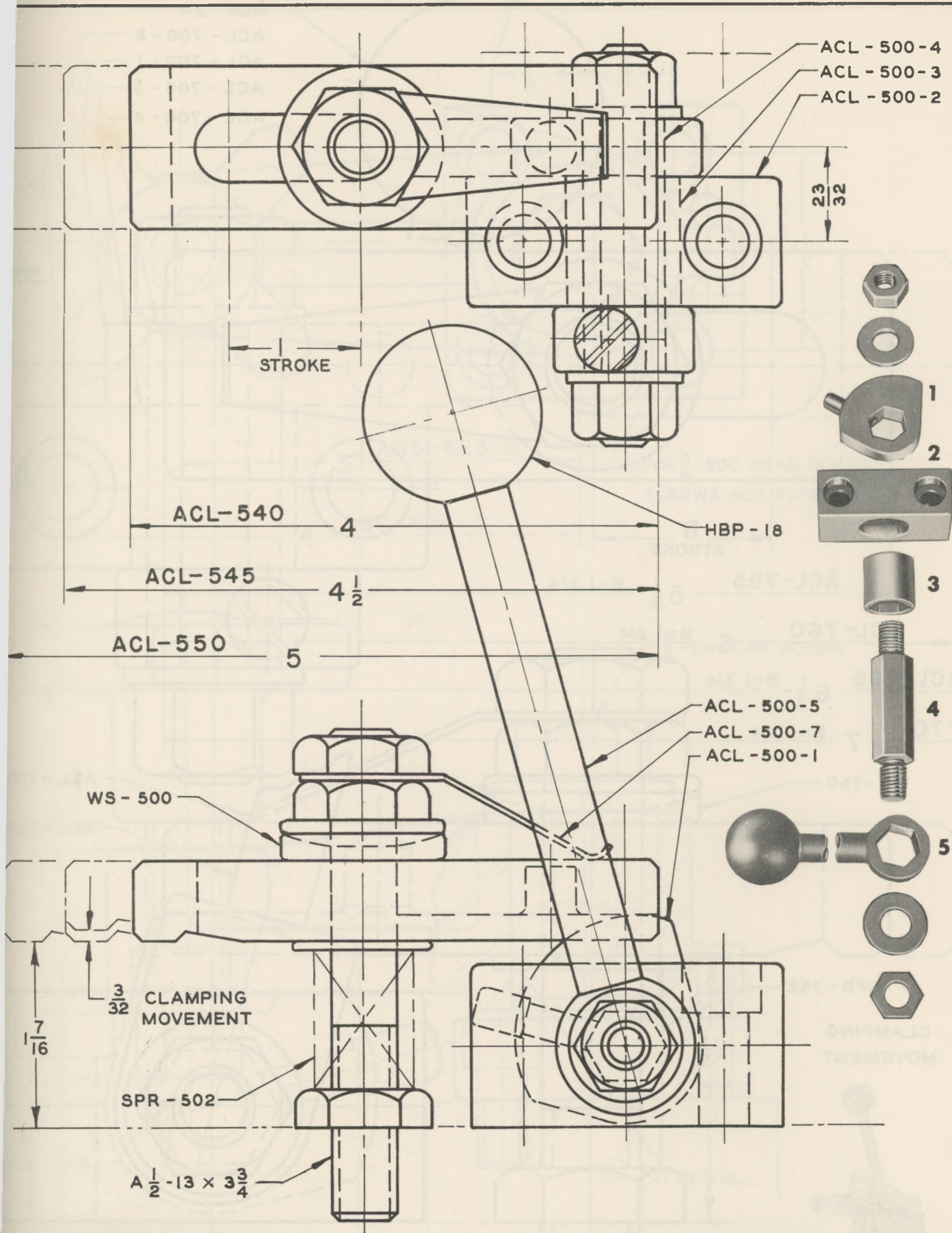
ASC





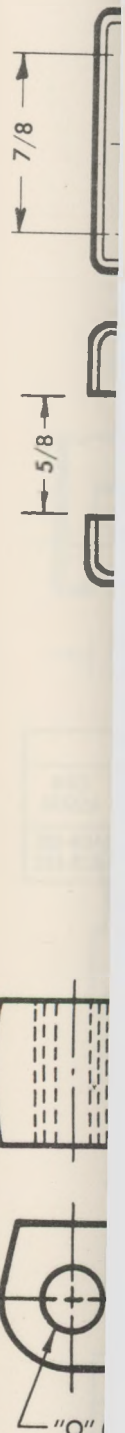




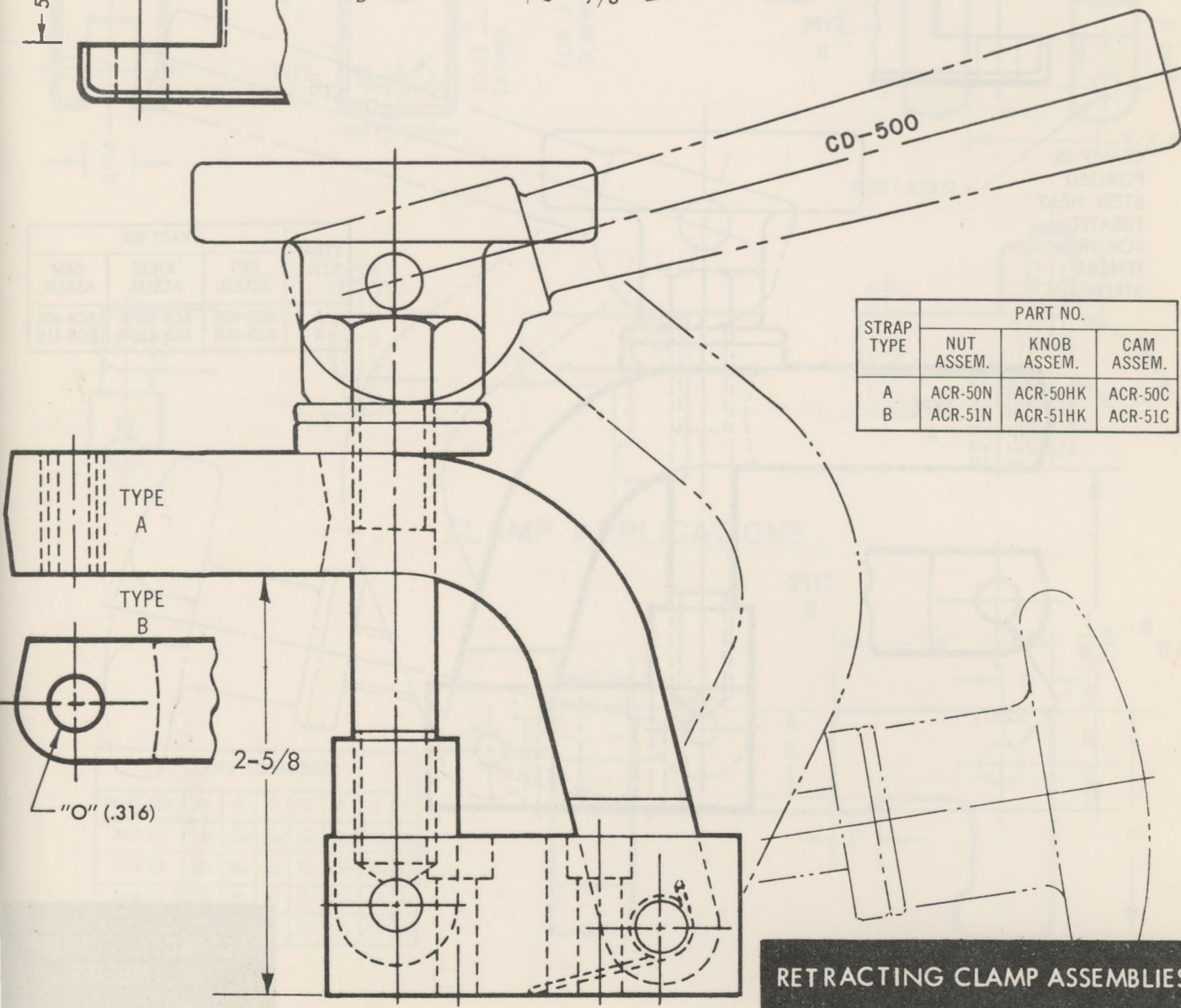
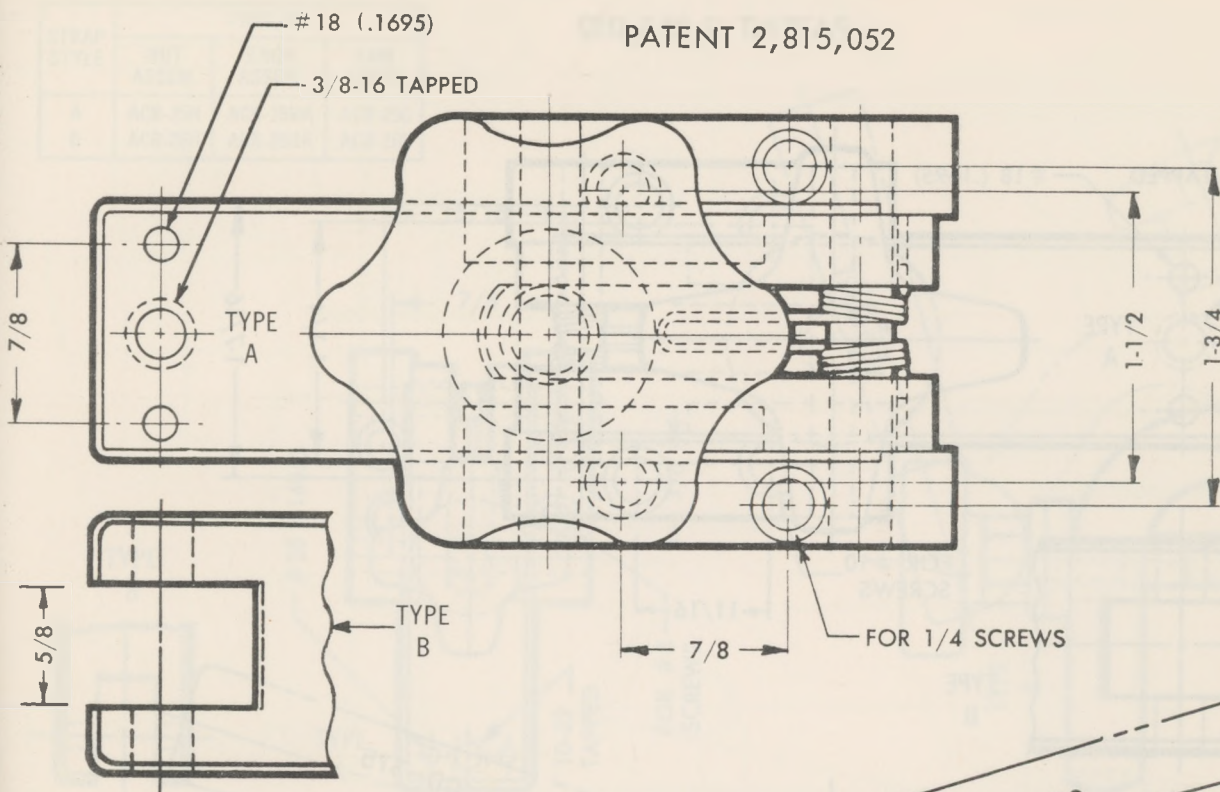


**LEVER CAM
CLAMP ASSEMBLIES**

POSITION OF LEVER HANDLE IS ADJUSTABLE THROUGH-
OUT 360° IN 30° INCREMENTS. LEVER CAM BLOCK
ASSEMBLY CAN BE REVERSED FOR OPPOSITE HAND
OPERATION.

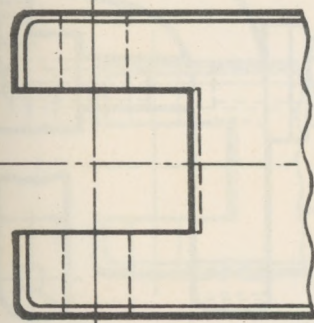
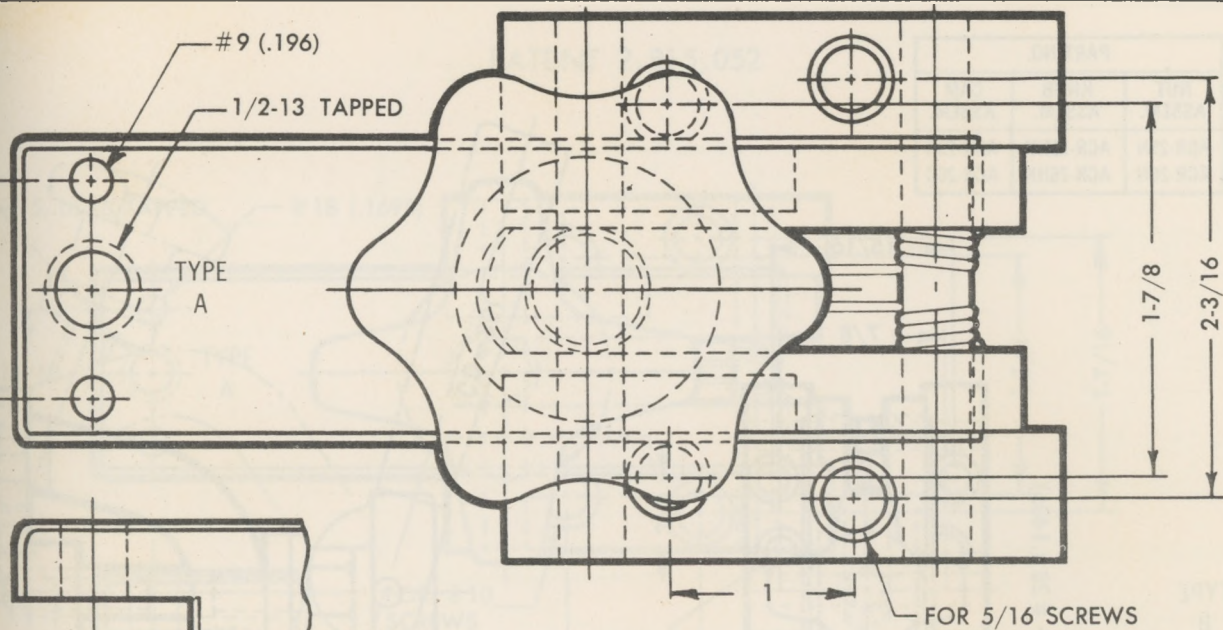


PATENT 2,815,052

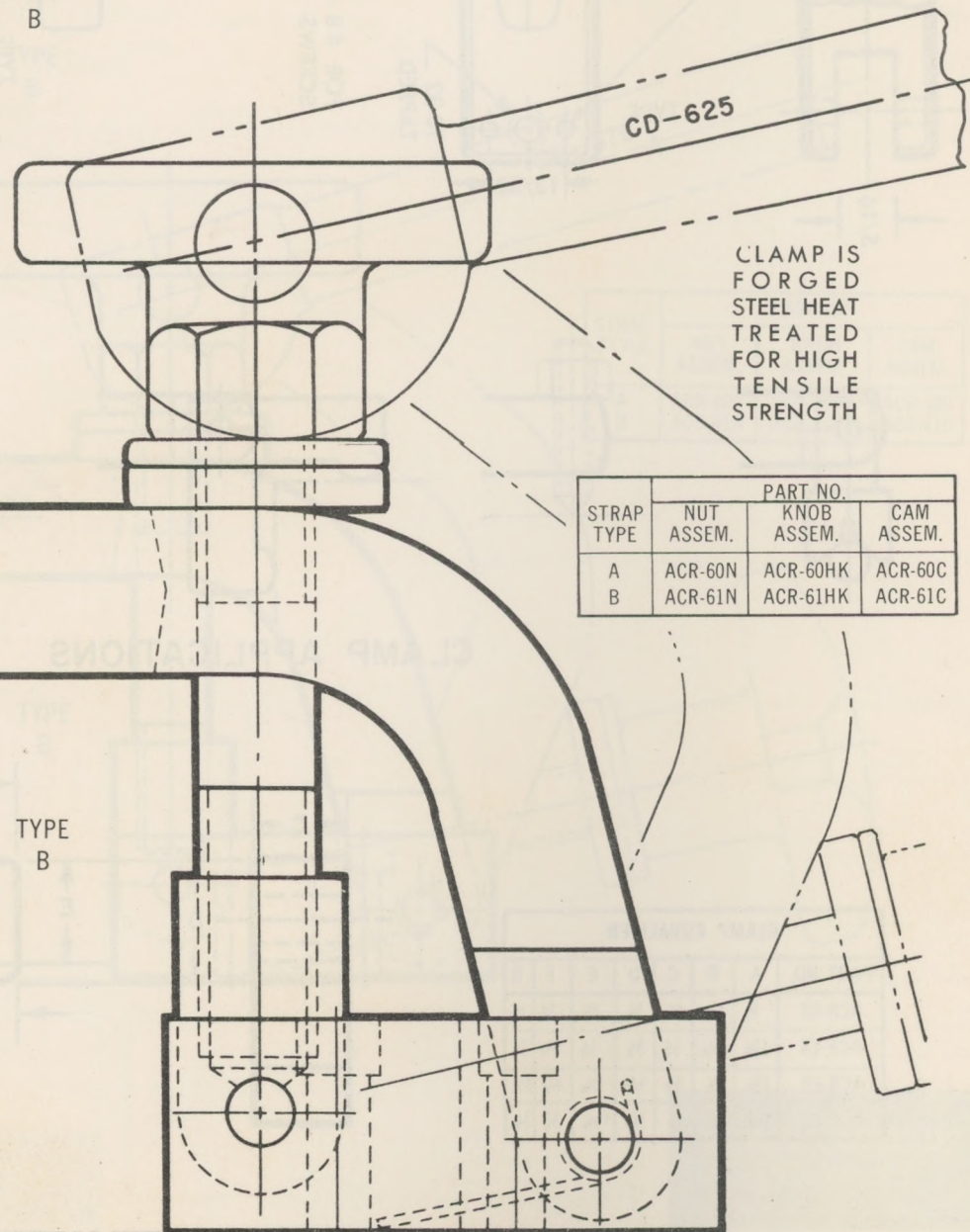


STRAP TYPE	PART NO.		
	NUT ASSEM.	KNOB ASSEM.	CAM ASSEM.
A	ACR-50N	ACR-50HK	ACR-50C
B	ACR-51N	ACR-51HK	ACR-51C

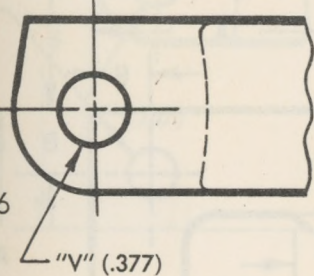
RETRACTING CLAMP ASSEMBLIES



TYPE B

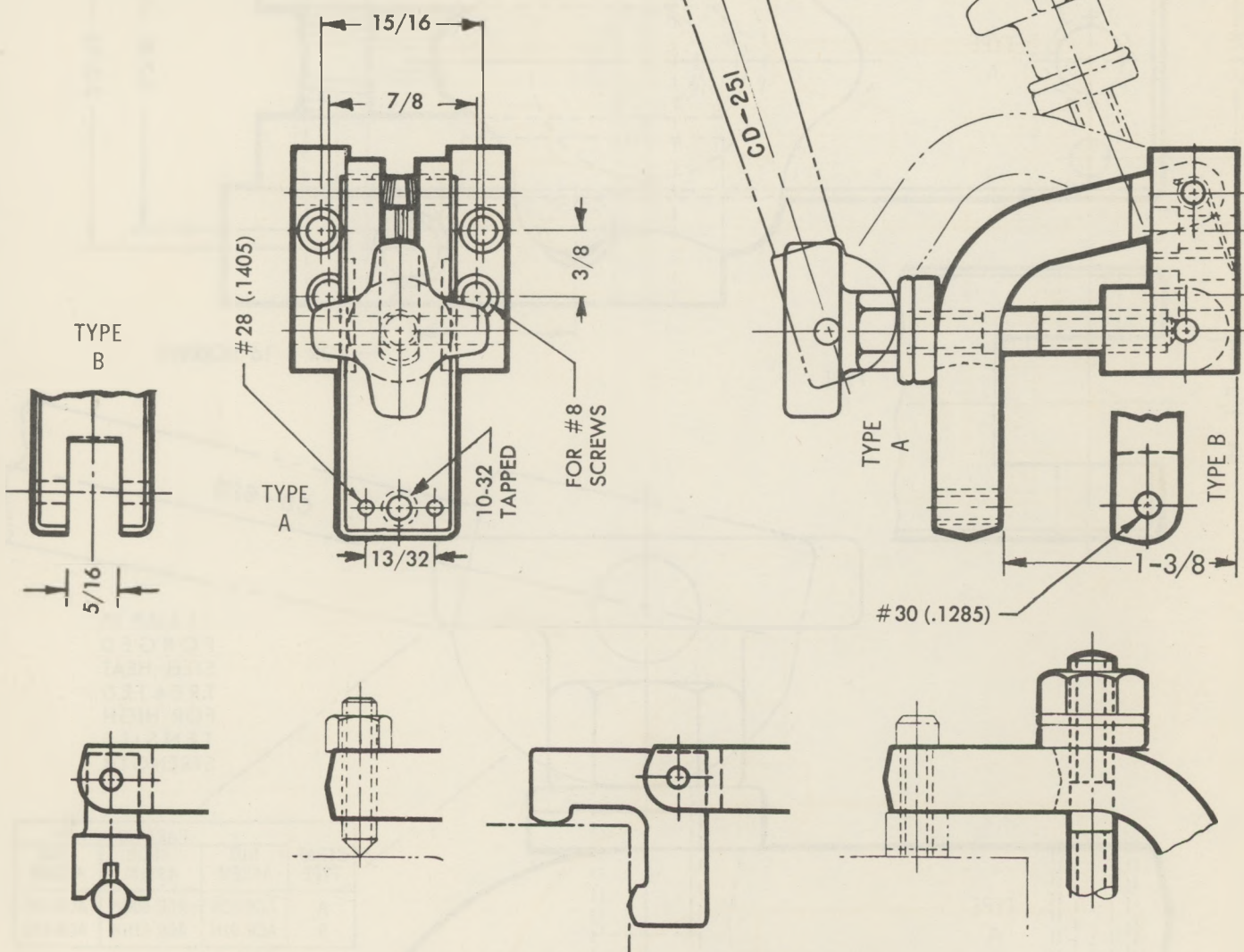


STRAP TYPE	PART NO.		
	NUT ASSEM.	KNOB ASSEM.	CAM ASSEM.
A	ACR-60N	ACR-60HK	ACR-60C
B	ACR-61N	ACR-61HK	ACR-61C



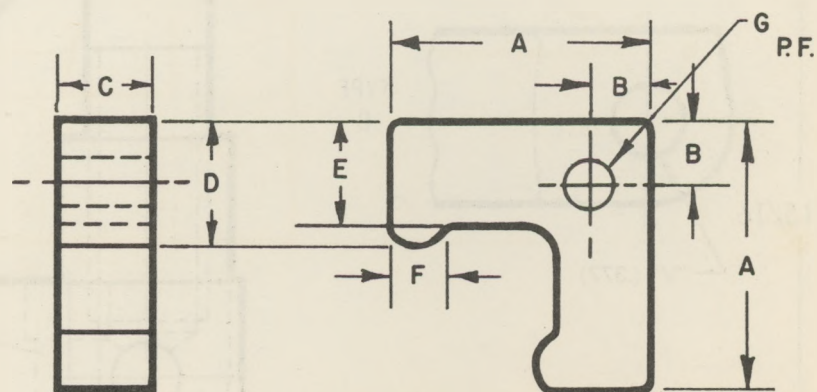
HAND KNOB
ASC-432-HK
ASC-437-HK
ASC-650-HK
ASC-660-HK

STRAP STYLE	PART NO.		
	NUT ASSEM.	KNOB ASSEM.	CAM ASSEM.
A	ACR-25N	ACR-25HK	ACR-25C
B	ACR-26N	ACR-26HK	ACR-26C

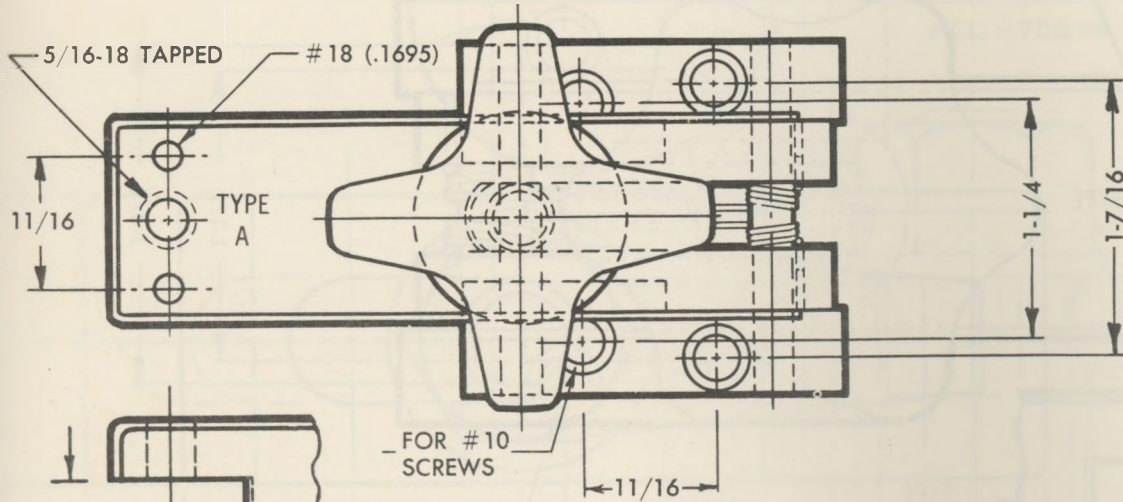


CLAMP APPLICATIONS

CLAMP EQUALIZER							
PART NO.	A	B	C	D	E	F	G
ACR-E2	7/8	3/16	3/16	3/8	3/16	1/4	3/8
ACR-E4	1 3/8	5/16	1/2	5/8	1/2	5/16	3/4
ACR-E5	1 1/8	3/8	5/8	3/4	1/16	5/16	5/16
ACR-E6	1 3/4	1/2	3/4	7/8	1 1/16	3/8	3/8



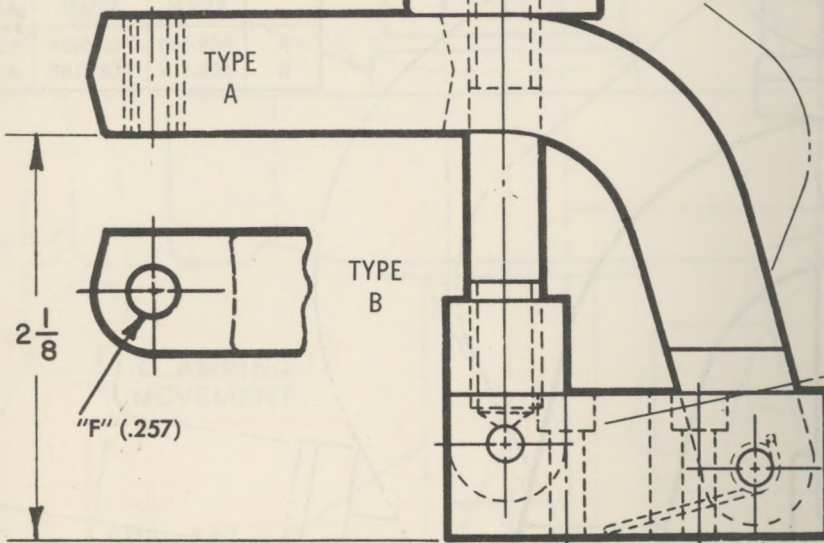
PATENT 2,815,052



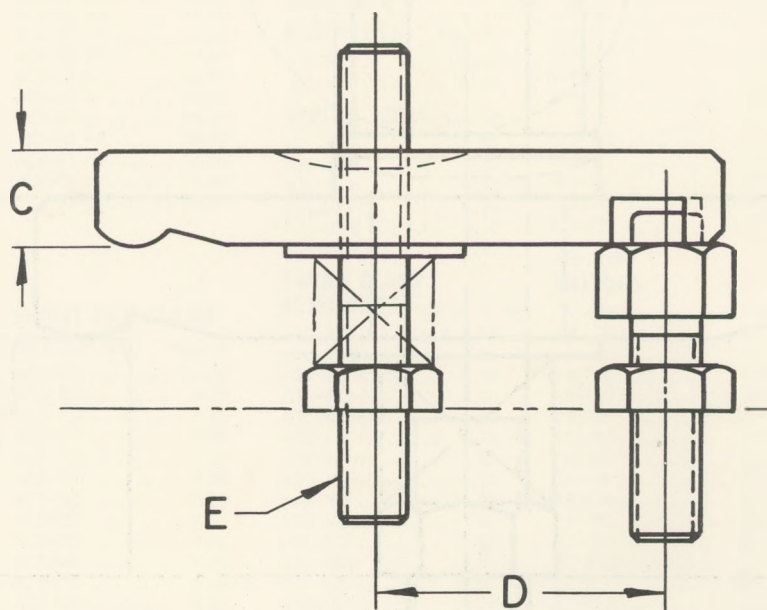
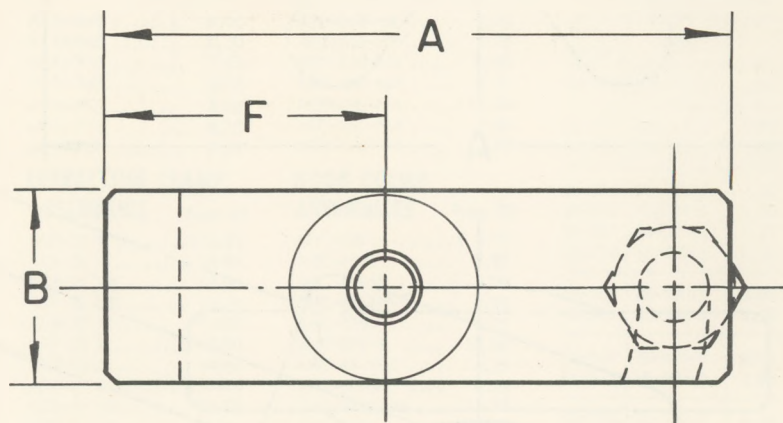
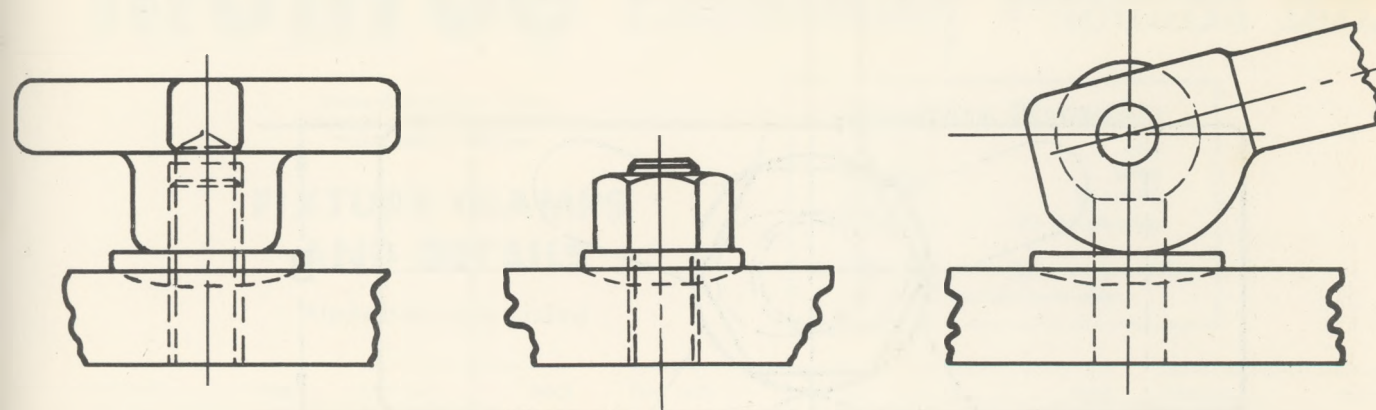
CLAMP IS FORGED STEEL HEAT TREATED FOR HIGH TENSILE STRENGTH

CD-375

STRAP STYLE	PART NO.		
	NUT ASSEM.	KNOB ASSEM.	CAM ASSEM.
A	ACR-40N	ACR-40HK	ACR-40C
B	ACR-41N	ACR-41HK	ACR-41C



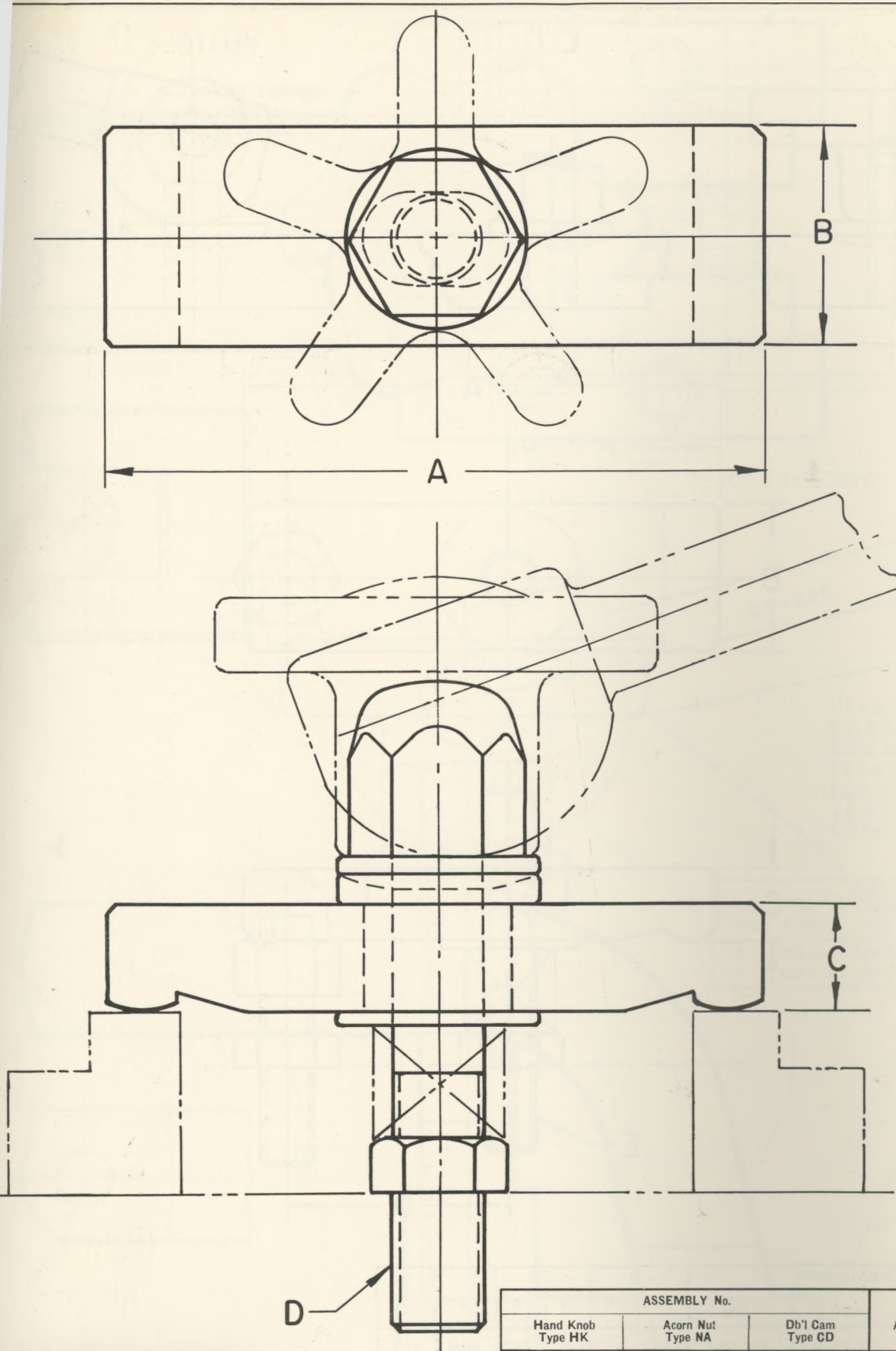
RETRACTING CLAMP ASSEMBLIES



ASSEMBLY NUMBER			A	B	C	D	E	F
HAND KNOB	NUT	CAM						
ASC-432-HK	ASC-432-N	ASC-432-C	3/4	1	1/2	1 1/2	3/8-16	1 7/16
ASC-437-HK	ASC-437-N	ASC-437-C	3 3/4					1 15/16
ASC-650-HK	ASC-650-N	ASC-650-C	5	1 1/2	3/4	2 5/8	5/8-11	1 7/8
ASC-660-HK	ASC-660-N	ASC-660-C	6					2 3/4

SWING CLAMP ASSEMBLIES

< < < m o n r o e > > >



**DOUBLE END
CLAMP ASSEMBLIES**

ASSEMBLY No.			A	B	C	D
Hand Knob Type HK	Acorn Nut Type NA	Db'l Cam Type CD				
AED-540-HK	AED-540-NA	AED-540-CD	4	1¼	⅝	½-13
AED-550-HK	AED-550-NA	AED-550-CD	5			
AED-555-HK	AED-555-NA	AED-555-CD	5½			
AED-645-HK	AED-645-NA	AED-645-CD	4½	1½	¾	⅝-11
AED-655-HK	AED-655-NA	AED-655-CD	5½			
AED-660-HK	AED-660-NA	AED-660-CD	6			

PART NO

**DOUBLE
ASSEMBLY**

ACD-220
ACD-222
ACD-430
ACD-432
ACD-440
ACD-530
ACD-540
ACD-542
ACD-550
ACD-560
ACD-640
ACD-642
ACD-650
ACD-660
ACD-662

**HEEL C
ASSEMBLY**

ACH-20
ACH-22
ACH-40
ACH-42
ACH-50
ACH-52
ACH-55
ACH-56
ACH-60
ACH-62
ACH-65
ACH-66

**LEVER
ASSEMBLY**

ACL-20
ACL-22
ACL-40
ACL-42
ACL-50
ACL-52
ACL-55
ACL-56
ACL-60
ACL-62
ACL-65
ACL-66

**NUT
ASSEMBLY**

ACN-20
ACN-22
ACN-40
ACN-42
ACN-50
ACN-52
ACN-55
ACN-56
ACN-60
ACN-62
ACN-65
ACN-66

monroe Engineering Products Inc.

Prices Effective January 1, 1967
Subject to Change Without Notice
F.O.B. Detroit, Mich.

14830 FENKELL AVENUE • DETROIT, MICHIGAN 48227
PHONE: Area Code 313 / 272-3288

monroe/KIPP ADJUSTABLE HANDLES

MONROE/KIPP STANDARD ADJUSTABLE HANDLES

PART NO.	PRICE EACH NET			
	1-25	26-100	101-300	301-UP
HA-100A	1.60	1.45	1.35	1.30
HA-110A	1.70	1.55	1.45	1.40
HA-125A	1.70	1.55	1.45	1.40
HA-200A	2.00	1.85	1.75	1.70
HA-200B	2.00	1.85	1.75	1.70
HA-225A	2.15	1.90	1.80	1.75
HA-225B	2.15	1.90	1.80	1.75
HA-231A	2.15	1.90	1.80	1.75
HA-231B	2.15	1.90	1.80	1.75
HA-300A	2.55	2.30	2.25	2.20
HA-300B	2.55	2.30	2.25	2.20
HA-337A	2.65	2.45	2.35	2.30
HA-337B	2.65	2.45	2.35	2.30
HA-350A	2.65	2.45	2.35	2.30
HA-350B	2.65	2.45	2.35	2.30
HA-400A	3.25	2.95	2.85	2.80
HA-400B	3.25	2.95	2.85	2.80
HA-450A	3.50	3.20	3.10	2.95
HA-450B	3.50	3.20	3.10	2.95
HA-462A	3.50	3.20	3.10	2.95
HA-462B	3.50	3.20	3.10	2.95

MONROE/KIPP STD. ADJUSTABLE HANDLES W/STUDS

PART NO.	PRICE EACH NET			
	1-25	26-100	101-300	301-UP
HAS-125	1.90	1.70	1.60	1.55
HAS-231	2.25	2.05	1.95	1.90
HAS-237	2.25	2.05	1.95	1.90
HAS-337	2.85	2.60	2.50	2.45
HAS-350	2.85	2.60	2.50	2.45
HAS-462	4.10	3.80	3.70	3.65
HAS-475	4.10	3.80	3.70	3.65

MONROE/KIPP HEAVY DUTY ADJUSTABLE HANDLES

PART NO.	PRICE EACH NET			
	1-25	26-100	101-300	301-UP
HAH-137	3.75	3.40	3.25	3.10
HAH-250	4.75	4.30	4.10	3.90
HAH-350	5.75	5.20	4.95	4.70
HAH-362	5.75	5.20	4.95	4.70
HAH-462	7.10	6.40	6.05	5.75
HAH-475	7.10	6.40	6.05	5.75
HAH-575	8.25	7.45	7.05	6.70
HAH-5100	8.25	7.45	7.05	6.70

MONROE/KIPP HVY. DUTY ADJUSTABLE HANDLES W/STUDS

PART NO.	PRICE EACH NET			
	1-25	26-100	101-300	301-UP
HAHS-137	3.95	3.55	3.40	3.25
HAHS-250	5.25	4.75	4.50	4.25
HAHS-350	6.10	5.50	5.20	4.95
HAHS-362	6.10	5.50	5.20	4.95
HAHS-462	7.50	6.75	6.40	6.10
HAHS-475	7.50	6.75	6.40	6.10
HAHS-575	8.75	7.85	7.45	7.10
HAHS-5100	8.95	8.05	7.65	7.25

SPECIALS and QUANTITY ORDERS

• Monroe/Kipp Adjustable Handles with special bores, threads or studs can be manufactured to your specifications. A sketch is required for an accurate quotation.

Quantity Orders: When ordered in quantity, the Standard Handles can be supplied in a variety of colors. Matte or polished chrome finishes are also available on both Standard and Heavy Duty Handles. Send for quotations.

monroe Engineering Products Inc.

Prices Effective May 1, 1966
Subject To Change Without Notice
F.O.B. Detroit, Michigan

FIXTURE CLAMPS AND DETAILS

Alphabetically Listed

Quantity Discounts

1 - 23	Net
24 - 47	10%
48 - 95	12-1/2%
96 & Over	On Application

Quantity Discounts apply to quantities
of one specific item only.

PART NO.	PRICE	PART NO.	PRICE	PART NO.	PRICE	PART NO.	PRICE	PART NO.	PRICE								
DOUBLE CAM CLAMP ASSEMBLIES Page 31		ACN-660	8.00	AED-660-HK	7.00	<table><tr><th>Hard-ened</th><th>Soft</th><th></th></tr><tr><td>BE-252</td><td>BE-252-S</td><td>1.35</td></tr></table>	Hard-ened	Soft		BE-252	BE-252-S	1.35					
Hard-ened	Soft																
BE-252	BE-252-S	1.35															
ACD-220	\$ 7.75	ACN-665	8.50	AED-540-NA	5.50	<table><tr><td>BE-313</td><td>BE-313-S</td><td>1.45</td></tr><tr><td>BE-315</td><td>BE-315-S</td><td>1.60</td></tr></table>	BE-313	BE-313-S	1.45	BE-315	BE-315-S	1.60					
BE-313	BE-313-S	1.45															
BE-315	BE-315-S	1.60															
ACD-225	8.00	ACN-750	7.75	AED-550-NA	6.00	<table><tr><td>BE-375</td><td>BE-375-S</td><td>1.50</td></tr><tr><td>BE-376</td><td>BE-376-S</td><td>1.50</td></tr></table>	BE-375	BE-375-S	1.50	BE-376	BE-376-S	1.50					
BE-375	BE-375-S	1.50															
BE-376	BE-376-S	1.50															
ACD-430	9.80	ACN-760	8.15	AED-555-NA	6.50	<table><tr><td>BE-377</td><td>BE-377-S</td><td>1.75</td></tr><tr><td>BE-378</td><td>BE-378-S</td><td>1.75</td></tr></table>	BE-377	BE-377-S	1.75	BE-378	BE-378-S	1.75					
BE-377	BE-377-S	1.75															
BE-378	BE-378-S	1.75															
ACD-435	9.90	ACN-765	8.50	AED-645-NA	6.50	<table><tr><td>BE-500</td><td>BE-500-S</td><td>2.00</td></tr><tr><td>BE-502</td><td>BE-502-S</td><td>2.30</td></tr></table>	BE-500	BE-500-S	2.00	BE-502	BE-502-S	2.30					
BE-500	BE-500-S	2.00															
BE-502	BE-502-S	2.30															
ACD-440	10.00	ACN-775	8.75	AED-655-NA	7.00	<table><tr><td>BE-625</td><td>BE-625-S</td><td>2.50</td></tr><tr><td>BE-626</td><td>BE-626-S</td><td>2.80</td></tr></table>	BE-625	BE-625-S	2.50	BE-626	BE-626-S	2.80					
BE-625	BE-625-S	2.50															
BE-626	BE-626-S	2.80															
ACD-535	10.50	ACN-780	9.50	AED-660-NA	7.50	<table><tr><td>BE-750</td><td>BE-750-S</td><td>4.00</td></tr><tr><td>BE-751</td><td>BE-751-S</td><td>4.50</td></tr></table>	BE-750	BE-750-S	4.00	BE-751	BE-751-S	4.50					
BE-750	BE-750-S	4.00															
BE-751	BE-751-S	4.50															
ACD-540	10.75	RETRACTING CLAMP ASSEMBLIES Page 41		HOOK CLAMP ASSEMBLIES Page 25		FORGED EYE BOLTS Page 7											
ACD-545	11.00	ACR-25 C	\$16.25	AHC-626	\$ 4.75	<table><tr><td>BEP-250</td><td></td><td>\$.40</td></tr><tr><td>BEP-375</td><td></td><td>.46</td></tr></table>	BEP-250		\$.40	BEP-375		.46					
BEP-250		\$.40															
BEP-375		.46															
ACD-555	11.25	ACR-26 C	16.50	AHC-626B	9.25	<table><tr><td>BEP-500</td><td></td><td>.56</td></tr><tr><td>BEP-625</td><td></td><td>.90</td></tr></table>	BEP-500		.56	BEP-625		.90					
BEP-500		.56															
BEP-625		.90															
ACD-560	11.75	ACR-25 HK	12.00	AHC-626SH	5.00	<table><tr><td>BEP-750</td><td></td><td>1.10</td></tr></table>	BEP-750		1.10								
BEP-750		1.10															
ACD-640	11.25	ACR-26 HK	12.50	AHC-626SH-B	9.50	<table><tr><td>BES-250</td><td></td><td>.45</td></tr><tr><td>BES-375</td><td></td><td>.50</td></tr></table>	BES-250		.45	BES-375		.50					
BES-250		.45															
BES-375		.50															
ACD-645	11.50	ACR-25 N	11.50	AHC-876	5.75	<table><tr><td>BES-500</td><td></td><td>.60</td></tr><tr><td>BES-625</td><td></td><td>1.00</td></tr></table>	BES-500		.60	BES-625		1.00					
BES-500		.60															
BES-625		1.00															
ACD-650	12.00	ACR-26 N	12.00	AHC-876-B	12.00	<table><tr><td>BES-750</td><td></td><td>1.20</td></tr></table>	BES-750		1.20								
BES-750		1.20															
ACD-660	12.00	ACR-40 C	19.00	AHC-876SH3	6.25	JIG FEET BUTTONS Page 9											
ACD-665	12.25	ACR-41 C	19.50	AHC-876SH5	6.25	<table><tr><td>BJF-425</td><td></td><td>\$.45</td></tr><tr><td>BJF-437</td><td></td><td>.45</td></tr></table>	BJF-425		\$.45	BJF-437		.45					
BJF-425		\$.45															
BJF-437		.45															
HEEL CLAMP ASSEMBLIES Page 35		ACR-40 HK	13.50	AHC-876SH5B	12.25	<table><tr><td>BJF-450</td><td></td><td>.50</td></tr><tr><td>BJF-626</td><td></td><td>.50</td></tr></table>	BJF-450		.50	BJF-626		.50					
BJF-450		.50															
BJF-626		.50															
ACH-220	\$ 5.25	ACR-41 HK	14.00	AHC-1126	6.25	<table><tr><td>BJF-637</td><td></td><td>.55</td></tr><tr><td>BJF-650</td><td></td><td>.55</td></tr></table>	BJF-637		.55	BJF-650		.55					
BJF-637		.55															
BJF-650		.55															
ACH-225	5.50	ACR-40 N	13.00	AHC-1126B	14.00	<table><tr><td>BJF-662</td><td></td><td>.60</td></tr><tr><td>BJF-675</td><td></td><td>.60</td></tr></table>	BJF-662		.60	BJF-675		.60					
BJF-662		.60															
BJF-675		.60															
ACH-432	6.50	ACR-41 N	13.50	AHC-1126SH	6.50	<table><tr><td>BJF-6100</td><td></td><td>.70</td></tr><tr><td>BJF-850</td><td></td><td>.80</td></tr></table>	BJF-6100		.70	BJF-850		.80					
BJF-6100		.70															
BJF-850		.80															
ACH-437	6.70	ACR-50 C	23.00	AHC-1126SHB	14.25	<table><tr><td>BJF-862</td><td></td><td>.85</td></tr><tr><td>BJF-875</td><td></td><td>.85</td></tr></table>	BJF-862		.85	BJF-875		.85					
BJF-862		.85															
BJF-875		.85															
ACH-535	7.75	ACR-51 C	23.50	JACK LOCK ASSEMBLIES Page 23		<table><tr><td>BJF-8100</td><td></td><td>.95</td></tr><tr><td>BJF-8112</td><td></td><td>1.00</td></tr></table>	BJF-8100		.95	BJF-8112		1.00					
BJF-8100		.95															
BJF-8112		1.00															
ACH-540	8.00	ACR-50 HK	16.00	AJL-625	\$36.00	<table><tr><td>BJF-8125</td><td></td><td>1.00</td></tr><tr><td>BJF-13075</td><td></td><td>1.30</td></tr></table>	BJF-8125		1.00	BJF-13075		1.30					
BJF-8125		1.00															
BJF-13075		1.30															
ACH-545	8.25	ACR-51 HK	16.50	AJL-875	48.00	<table><tr><td>BJF-13100</td><td></td><td>1.45</td></tr><tr><td>BJF-13150</td><td></td><td>1.50</td></tr></table>	BJF-13100		1.45	BJF-13150		1.50					
BJF-13100		1.45															
BJF-13150		1.50															
ACH-550	8.50	ACR-50 N	15.50	SPRING JACKS Page 20		<table><tr><td>BL-250</td><td>BL-250-S</td><td>\$1.20</td></tr><tr><td>BL-251</td><td>BL-251-S</td><td>1.25</td></tr></table>	BL-250	BL-250-S	\$1.20	BL-251	BL-251-S	1.25					
BL-250	BL-250-S	\$1.20															
BL-251	BL-251-S	1.25															
ACH-640	8.50	ACR-60 C	29.00	AJS-50 A	\$8.50	<table><tr><td>BL-252</td><td>BL-252-S</td><td>1.35</td></tr></table>	BL-252	BL-252-S	1.35								
BL-252	BL-252-S	1.35															
ACH-645	8.75	ACR-61 C	29.50	AJS-50 B	9.50	<table><tr><td>BL-313</td><td>BL-313-S</td><td>1.35</td></tr><tr><td>BL-314</td><td>BL-314-S</td><td>1.60</td></tr></table>	BL-313	BL-313-S	1.35	BL-314	BL-314-S	1.60					
BL-313	BL-313-S	1.35															
BL-314	BL-314-S	1.60															
ACH-650	9.00	ACR-60 HK	20.30	AJS-55 B	9.50	LATCH BOLTS Page 7											
ACH-655	9.25	ACR-61 HK	20.80	AJS-60 A	8.50	<table><tr><th>Hard-ened</th><th>Soft</th><th></th></tr><tr><td>BL-250</td><td>BL-250-S</td><td>\$1.25</td></tr></table>	Hard-ened	Soft		BL-250	BL-250-S	\$1.25					
Hard-ened	Soft																
BL-250	BL-250-S	\$1.25															
LEVER CAM CLAMP ASSEMBLY Page 39		ACR-60 N	19.60	AJS-60 B	9.50	EYE BOLTS Page 7											
ACL-225	\$18.00	ACR-61 N	20.10	AJS-65 B	9.50	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>	BE-250	BE-250-S	\$1.25								
BE-250	BE-250-S	\$1.25															
ACL-435	24.00	SINGLE CAM CLAMP ASSEMBLIES Page 29		SWING CLAMP ASSEMBLIES Page 37 & 43		Quantity Discounts											
ACL-440	24.50	ACS-220	\$6.50	ASC-312	\$ 8.00	<table><tr><td>1 - 23</td><td>Net</td><td></td></tr></table>		1 - 23	Net								
1 - 23	Net																
ACL-445	24.60	ACS-225	6.75	ASC-312B	12.00	<table><tr><td>24 - 47</td><td>10%</td><td></td></tr></table>		24 - 47	10%								
24 - 47	10%																
ACL-540	25.00	ACS-432	8.00	ASC-432-C	8.50	<table><tr><td>48 - 95</td><td>12-1/2%</td><td></td></tr></table>		48 - 95	12-1/2%								
48 - 95	12-1/2%																
ACL-545	25.30	ACS-437	8.25	ASC-432-N	5.70	<table><tr><td>96 - 191</td><td>15%</td><td></td></tr></table>		96 - 191	15%								
96 - 191	15%																
ACL-550	25.60	ACS-535	8.25	ASC-432-HK	6.00	<table><tr><td>192 - 383</td><td>17-1/2%</td><td></td></tr></table>		192 - 383	17-1/2%								
192 - 383	17-1/2%																
ACL-645	31.00	ACS-540	8.50	ASC-437-C	8.75	<table><tr><td>384 - 767</td><td>20%</td><td></td></tr></table>		384 - 767	20%								
384 - 767	20%																
ACL-650	31.40	ACS-545	8.75	ASC-437-N	6.00	<table><tr><td>768 - 1535</td><td>22%</td><td></td></tr></table>		768 - 1535	22%								
768 - 1535	22%																
ACL-655	31.80	ACS-550	9.00	ASC-437-HK	6.25	<table><tr><td>1536 - 3071</td><td>25%</td><td></td></tr></table>		1536 - 3071	25%								
1536 - 3071	25%																
ACL-660	32.00	ACS-555	9.25	ASC-502	11.00	<table><tr><td>3072 - 6143</td><td>27-1/2%</td><td></td></tr></table>		3072 - 6143	27-1/2%								
3072 - 6143	27-1/2%																
ACL-755	32.00	ACS-640	8.75	ASC-502B	15.50	<table><tr><td>6144 - 12287</td><td>30%</td><td></td></tr></table>		6144 - 12287	30%								
6144 - 12287	30%																
ACL-760	32.50	ACS-645	9.00	ASC-503	11.00	<table><tr><td>12288 - 24575</td><td>33%</td><td></td></tr></table>		12288 - 24575	33%								
12288 - 24575	33%																
ACL-765	33.00	ACS-650	9.25	ASC-503B	15.75	<table><tr><td>24576 - 49151</td><td>35%</td><td></td></tr></table>		24576 - 49151	35%								
24576 - 49151	35%																
ACL-770	33.50	ACS-655	9.50	ASC-623	12.00	<table><tr><td>49152 - 98303</td><td>37-1/2%</td><td></td></tr></table>		49152 - 98303	37-1/2%								
49152 - 98303	37-1/2%																
NUT CLAMP ASSEMBLIES Page 33		DOUBLE END CLAMP ASSEMBLIES Page 44		EYE BOLTS Page 7		Quantity Discounts											
ACN-220	\$4.25	AED-540-CD	\$10.00	<table><tr><th>Hard-ened</th><th>Soft</th><th></th></tr><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		Hard-ened	Soft		BE-250	BE-250-S	\$1.25						
Hard-ened	Soft																
BE-250	BE-250-S	\$1.25															
ACN-225	4.25	AED-550-CD	10.50	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-430	5.35	AED-555-CD	11.00	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-435	5.45	AED-645-CD	10.50	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-440	5.55	AED-655-CD	11.00	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-535	5.75	AED-540-HK	5.00	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-540	5.75	AED-550-HK	5.50	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-545	6.00	AED-555-HK	6.00	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-555	6.25	AED-645-HK	6.00	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-560	6.50	AED-655-HK	6.50	<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-640	7.25	Quantity Discounts		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25									
BE-250	BE-250-S	\$1.25															
ACN-645	7.25	<table><tr><td>1 - 23</td><td>Net</td><td></td></tr></table>		1 - 23	Net		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25						
1 - 23	Net																
BE-250	BE-250-S	\$1.25															
ACN-650	7.50	<table><tr><td>24 - 47</td><td>10%</td><td></td></tr></table>		24 - 47	10%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25						
24 - 47	10%																
BE-250	BE-250-S	\$1.25															
Quantity Discounts		<table><tr><td>48 - 95</td><td>12-1/2%</td><td></td></tr></table>		48 - 95	12-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25						
48 - 95	12-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>96 - 191</td><td>15%</td><td></td></tr></table>		96 - 191	15%		<table><tr><td>192 - 383</td><td>17-1/2%</td><td></td></tr></table>		192 - 383	17-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
96 - 191	15%																
192 - 383	17-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>384 - 767</td><td>20%</td><td></td></tr></table>		384 - 767	20%		<table><tr><td>768 - 1535</td><td>22%</td><td></td></tr></table>		768 - 1535	22%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
384 - 767	20%																
768 - 1535	22%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>1536 - 3071</td><td>25%</td><td></td></tr></table>		1536 - 3071	25%		<table><tr><td>3072 - 6143</td><td>27-1/2%</td><td></td></tr></table>		3072 - 6143	27-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
1536 - 3071	25%																
3072 - 6143	27-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>6144 - 12287</td><td>30%</td><td></td></tr></table>		6144 - 12287	30%		<table><tr><td>12288 - 24575</td><td>33%</td><td></td></tr></table>		12288 - 24575	33%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
6144 - 12287	30%																
12288 - 24575	33%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>24576 - 49151</td><td>35%</td><td></td></tr></table>		24576 - 49151	35%		<table><tr><td>49152 - 98303</td><td>37-1/2%</td><td></td></tr></table>		49152 - 98303	37-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
24576 - 49151	35%																
49152 - 98303	37-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>98304 - 196607</td><td>40%</td><td></td></tr></table>		98304 - 196607	40%		<table><tr><td>196608 - 393215</td><td>42-1/2%</td><td></td></tr></table>		196608 - 393215	42-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
98304 - 196607	40%																
196608 - 393215	42-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>393216 - 786431</td><td>45%</td><td></td></tr></table>		393216 - 786431	45%		<table><tr><td>786432 - 1572863</td><td>47-1/2%</td><td></td></tr></table>		786432 - 1572863	47-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
393216 - 786431	45%																
786432 - 1572863	47-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>1572864 - 3145727</td><td>50%</td><td></td></tr></table>		1572864 - 3145727	50%		<table><tr><td>3145728 - 6291455</td><td>52-1/2%</td><td></td></tr></table>		3145728 - 6291455	52-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
1572864 - 3145727	50%																
3145728 - 6291455	52-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>6291456 - 12582911</td><td>55%</td><td></td></tr></table>		6291456 - 12582911	55%		<table><tr><td>12582912 - 25165823</td><td>57-1/2%</td><td></td></tr></table>		12582912 - 25165823	57-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
6291456 - 12582911	55%																
12582912 - 25165823	57-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>25165824 - 50331647</td><td>60%</td><td></td></tr></table>		25165824 - 50331647	60%		<table><tr><td>50331648 - 100663295</td><td>62-1/2%</td><td></td></tr></table>		50331648 - 100663295	62-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
25165824 - 50331647	60%																
50331648 - 100663295	62-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>100663296 - 201326591</td><td>65%</td><td></td></tr></table>		100663296 - 201326591	65%		<table><tr><td>201326592 - 402653183</td><td>67-1/2%</td><td></td></tr></table>		201326592 - 402653183	67-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
100663296 - 201326591	65%																
201326592 - 402653183	67-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>402653184 - 805306367</td><td>70%</td><td></td></tr></table>		402653184 - 805306367	70%		<table><tr><td>805306368 - 1610612735</td><td>72-1/2%</td><td></td></tr></table>		805306368 - 1610612735	72-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
402653184 - 805306367	70%																
805306368 - 1610612735	72-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>1610612736 - 3221225471</td><td>75%</td><td></td></tr></table>		1610612736 - 3221225471	75%		<table><tr><td>3221225472 - 6442450943</td><td>77-1/2%</td><td></td></tr></table>		3221225472 - 6442450943	77-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
1610612736 - 3221225471	75%																
3221225472 - 6442450943	77-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>6442450944 - 12884901887</td><td>80%</td><td></td></tr></table>		6442450944 - 12884901887	80%		<table><tr><td>12884901888 - 25769803773</td><td>82-1/2%</td><td></td></tr></table>		12884901888 - 25769803773	82-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
6442450944 - 12884901887	80%																
12884901888 - 25769803773	82-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>25769803774 - 51539607547</td><td>85%</td><td></td></tr></table>		25769803774 - 51539607547	85%		<table><tr><td>51539607548 - 103079215093</td><td>87-1/2%</td><td></td></tr></table>		51539607548 - 103079215093	87-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
25769803774 - 51539607547	85%																
51539607548 - 103079215093	87-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>103079215094 - 206158430187</td><td>90%</td><td></td></tr></table>		103079215094 - 206158430187	90%		<table><tr><td>206158430188 - 412316860375</td><td>92-1/2%</td><td></td></tr></table>		206158430188 - 412316860375	92-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
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206158430188 - 412316860375	92-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>412316860376 - 824633720751</td><td>95%</td><td></td></tr></table>		412316860376 - 824633720751	95%		<table><tr><td>824633720752 - 1649267441503</td><td>97-1/2%</td><td></td></tr></table>		824633720752 - 1649267441503	97-1/2%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
412316860376 - 824633720751	95%																
824633720752 - 1649267441503	97-1/2%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>1649267441504 - 3298534883007</td><td>100%</td><td></td></tr></table>		1649267441504 - 3298534883007	100%		<table><tr><td>3298534883008 - 6597069766015</td><td>100%</td><td></td></tr></table>		3298534883008 - 6597069766015	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
1649267441504 - 3298534883007	100%																
3298534883008 - 6597069766015	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>6597069766016 - 13194139532031</td><td>100%</td><td></td></tr></table>		6597069766016 - 13194139532031	100%		<table><tr><td>13194139532032 - 26388279064063</td><td>100%</td><td></td></tr></table>		13194139532032 - 26388279064063	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
6597069766016 - 13194139532031	100%																
13194139532032 - 26388279064063	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>26388279064064 - 52776558128127</td><td>100%</td><td></td></tr></table>		26388279064064 - 52776558128127	100%		<table><tr><td>52776558128128 - 105553116256255</td><td>100%</td><td></td></tr></table>		52776558128128 - 105553116256255	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
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52776558128128 - 105553116256255	100%																
BE-250	BE-250-S	\$1.25															
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105553116256256 - 211106232512511	100%																
211106232512512 - 422212465025023	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>422212465025024 - 844424930050047</td><td>100%</td><td></td></tr></table>		422212465025024 - 844424930050047	100%		<table><tr><td>844424930050048 - 1688849860100093</td><td>100%</td><td></td></tr></table>		844424930050048 - 1688849860100093	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
422212465025024 - 844424930050047	100%																
844424930050048 - 1688849860100093	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>1688849860100094 - 3377699720200187</td><td>100%</td><td></td></tr></table>		1688849860100094 - 3377699720200187	100%		<table><tr><td>3377699720200188 - 6755399440400375</td><td>100%</td><td></td></tr></table>		3377699720200188 - 6755399440400375	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
1688849860100094 - 3377699720200187	100%																
3377699720200188 - 6755399440400375	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>6755399440400376 - 13510798880800751</td><td>100%</td><td></td></tr></table>		6755399440400376 - 13510798880800751	100%		<table><tr><td>13510798880800752 - 27021597761601503</td><td>100%</td><td></td></tr></table>		13510798880800752 - 27021597761601503	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
6755399440400376 - 13510798880800751	100%																
13510798880800752 - 27021597761601503	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>27021597761601504 - 54043195523203007</td><td>100%</td><td></td></tr></table>		27021597761601504 - 54043195523203007	100%		<table><tr><td>54043195523203008 - 108086391046406015</td><td>100%</td><td></td></tr></table>		54043195523203008 - 108086391046406015	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
27021597761601504 - 54043195523203007	100%																
54043195523203008 - 108086391046406015	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>108086391046406016 - 216172782092812031</td><td>100%</td><td></td></tr></table>		108086391046406016 - 216172782092812031	100%		<table><tr><td>216172782092812032 - 432345564185624063</td><td>100%</td><td></td></tr></table>		216172782092812032 - 432345564185624063	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
108086391046406016 - 216172782092812031	100%																
216172782092812032 - 432345564185624063	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>432345564185624064 - 864691128371248127</td><td>100%</td><td></td></tr></table>		432345564185624064 - 864691128371248127	100%		<table><tr><td>864691128371248128 - 1729382256742496255</td><td>100%</td><td></td></tr></table>		864691128371248128 - 1729382256742496255	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
432345564185624064 - 864691128371248127	100%																
864691128371248128 - 1729382256742496255	100%																
BE-250	BE-250-S	\$1.25															
<table><tr><td>1729382256742496256 - 3458764513484992511</td><td>100%</td><td></td></tr></table>		1729382256742496256 - 3458764513484992511	100%		<table><tr><td>3458764513484992512 - 6917529026969985023</td><td>100%</td><td></td></tr></table>		3458764513484992512 - 6917529026969985023	100%		<table><tr><td>BE-250</td><td>BE-250-S</td><td>\$1.25</td></tr></table>		BE-250	BE-250-S	\$1.25			
1729382256742496256 - 3458764513484992511	100%																
3458764513484992512 - 6917529026969985023	100%																
BE-250	BE-250-S	\$1.25															

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PART NO.	PRICE
BR-625-TS	2.40
BR-627-TS	2.40
BR-753-TS	3.10
BR-755-TS	3.10
BR-757-TS	3.30

JIG FEET BUTTONS

Stud Type	Page 9
BSF-253	\$.45
BSF-25445
BSF-25545
BSF-25650
BSF-37250
BSF-37350
BSF-37450
BSF-50355
BSF-50455
BSF-50555
BSF-50660
BSF-50760
BSF-50860

CLAMP STRAPS Page 16

C-220-C	\$2.00
C-225-C	2.00
C-432-C	2.50
C-437-C	2.65
C-535-C	2.75
C-540-C	2.75
C-545-C	3.00
C-550-C	3.25
C-555-C	3.50
C-640-C	3.00
C-645-C	3.00
C-650-C	3.25
C-655-C	3.50
C-220-N	2.00
C-225-N	2.00
C-430-N	2.15
C-435-N	2.25
C-440-N	2.35
C-535-N	2.75
C-540-N	2.75
C-545-N	3.00
C-555-N	3.25
C-560-N	3.50
C-640-N	3.00
C-645-N	3.25
C-650-N	3.50
C-660-N	4.00
C-665-N	4.25
C-750-N	3.25
C-760-N	3.75
C-765-N	4.00
C-775-N	4.25
C-780-N	5.00

C-220-H	2.00
C-225-H	2.00
C-432-H	2.25
C-437-H	2.50
C-535-H	2.75
C-540-H	2.75
C-545-H	3.00
C-550-H	3.25
C-640-H	3.00
C-645-H	3.00
C-650-H	3.25
C-655-H	3.50

FIXTURE CAMS Page 27

C-500	\$10.00
C-625	11.00
C-750	13.00
C-875	15.00
C-1000	17.00
C-1250	19.00

DOUBLE CAMS Page 32

CD-251	\$4.00
CD-375	5.00
CD-500	6.00
CD-625	7.00

CAM LOCKS Page 21 & 22

CL-375	\$10.00
CL-500	11.00
CL-562	12.00
CL-563	12.50
CL-750	13.50
CL-751	14.50
CL-1000	19.00

SINGLE CAMS Page 30

CS-250	\$2.50
CS-375	2.75
CS-500	3.00
CS-625	4.00

GUIDE BLOCKS Page 19

GB-187	\$1.10
GB-250	1.20
GB-375	1.45
GB-500	1.45

BALL HANDLES

HBA-130	\$2.00
HBA-131	3.00
HBA-132	3.00
HBA-140	2.50
HBA-141	3.50
HBA-142	3.50
HBD-120	1.70
HBD-121	2.70
HBD-125	2.70
HBD-150	2.10
HBD-151	3.30
HBD-155	3.10
HBD-160	2.50
HBD-161	3.90
HBD-165	3.50

BAR KNOBS Page 2

HBK-200	\$1.10
HBK-201	1.55
HBK-202	1.55
HBK-205	1.55
HBK-206	1.55
HBK-250	1.35
HBK-252	2.00
HBK-253	2.00
HBK-256	2.00
HBK-257	2.00
HBK-350	2.00
HBK-351	3.20
HBK-352	3.20
HBK-353	3.20
HBK-355	3.20
HBK-356	3.20
HBK-357	3.20

CONTROL HANDLES**PLASTIC BALL** Page 1

HPB-7	\$.30
HPB-1130
HPB-1230
HPB-1330
HPB-1430
HPB-1630
HPB-1730
HPB-1840
HPB-1940
HPB-2160
HPB-2260
HPB-2495
HPB-24M	
(molded thread)45

CONTROL HANDLES**STEEL BALL** Page 1

HBS-10	\$1.10
HBS-11	1.35
HBS-12	1.35
HBS-13	1.35
HBS-14	1.35
HBS-15	1.35

HBS-16	1.85
HBS-17	1.85
HBS-18	1.85
HBS-19	1.85
HBS-20	2.50
HBS-21	3.00
HBS-22	3.00
HBS-23	3.00
HBS-24	3.00

CRANK HANDLES BLANK Page 3

HC-1	\$2.10
HC-2	2.30
HC-3	2.45
HC-4	2.50
HC-5	2.80
HC-6	3.45
HC-7	4.40
HC-8	6.00
HC-9	7.00
HC-10	8.10
HC-11	11.25

CRANK HANDLES**FINISHED** Page 3

HC-501	\$ 3.80
HC-502	4.10
HC-503	4.70
HC-564	4.70
HC-565	5.40
HC-626	6.40
HC-687	7.80
HC-758	9.60
HC-879	11.80
HC-880	13.20
HC-1011	16.50

FINGER**HANDLES** Page 4

HF-192	\$.30
HF-31235

KNOB HANDLES Page 1

HK-110	\$.25
HK-11145
HK-11645
HK-15030
HK-15150
HK-15545
HK-20040
HK-20165
HK-20560
HK-20660
HK-25050
HK-25175
HK-25275
HK-25670
HK-25770
HK-26065
HK-26190
HK-30070
HK-30195
HK-302	1.00
HK-30595
HK-306	1.00

HKS-20050
HKS-20175
HKS-20670
HKS-27065
HKS-27190
HKS-27290
HKS-27590
HKS-27690
HKS-28080
HKS-281	1.10
HKS-282	1.10
HKS-285	1.10
HKS-286	1.10
HKS-35095
HKS-351	1.20
HKS-355	1.20

KNURLED KNOB HANDLES Page 1

HKK-31	\$.50
HKK-3250
HKK-3550
HKK-3650
HKK-4165
HKK-4265
HKK-4565
HKK-4665
HKK-5180
HKK-5280
HKK-5580
HKK-5680

WING NUT**HANDLES** Page 3

HNW-400	\$1.50
HNW-402	2.10
HNW-404	2.10

OFFSET HANDLES Page 2

HO-110	\$.75
HO-111	1.20
HO-112	1.20
HO-115	1.20
HO-116	1.20
HO-12085
HO-121	1.35
HO-125	1.35
HO-130	1.00
HO-131	1.50
HO-135	1.50
HO-140	1.25
HO-141	1.75
HO-145	1.75

TORQUE HEADS Page 12

PART NO.	1-5 Pcs.	6-59 Pcs.	60- 107	108 & Up
HTA-378	\$5.30	\$4.85	\$4.65	\$4.40
HTA-528	5.65	5.20	5.00	4.75
HTR-190	4.85	4.40	4.20	3.95
HTR-250	4.75	4.30	4.10	3.85
HTR-312	4.85	4.40	4.20	3.95
HTR-375	4.85	4.40	4.20	3.95
HTR-500	4.90	4.45	4.25	4.00

Total pieces ordered determines unit price.

HAND WHEELS Page 4

HW-3	HWO-3	\$ 1.50
HW-4	HWO-4	1.80
HW-5	HWO-5	2.50
HW-6	HWO-6	3.40
HW-7	HWO-7	4.25
HW-8	HWO-8	5.50
HW-10	HWO-10	7.25
HW-12	HWO-12	12.00

HWF-3	HWO-3	4.75
HWF-4	HWO-4	6.00
HWF-5	HWO-5	6.50
HWF-6	HWO-6	7.75
HWF-7	HWO-7	9.00
HWF-8	HWO-8	10.50
HWF-10	HWO-10	13.00
HWF-12	HWO-12	18.00

HWF-3H	HWO-3H	6.95
HWF-4H	HWO-4H	7.90
HWF-5H	HWO-5H	9.10
HWF-6H	HWO-6H	10.75
HWF-7H	HWO-7H	12.60
HWF-8H	HWO-8H	14.10
HWF-10H	HWO-10H	16.90
HWF-12H	HWO-12H	22.00

HWF-4HR	HWO-4HR	10.80
HWF-5HR	HWO-5HR	11.30
HWF-6HR	HWO-6HR	13.50
HWF-7HR	HWO-7HR	14.75
HWF-8HR	HWO-8HR	16.25
HWF-10HR	HWO-10HR	19.30
HWF-12HR	HWO-12HR	24.50

CONTROL HANDLES OVAL PLASTIC BALL Page 1

HOP-11	\$.35
HOP-1235
HOP-1335
HOP-1435
HOP-1645
HOP-1745
HOP-1845

MACHINE HANDLES Page 4

HP-1	\$.60
HP-270
HP-390
HP-4	1.00
HP-5	1.20
HP-6	1.40
HP-7	1.50
HP-8	1.60
HP-9	1.70
HP-10	1.85
HP-11	1.95
HP-12	2.50

HR-1	2.80
HR-2	3.25
HR-3	3.80
HR-4	4.20

HT-6	2.50
HT-7	2.70
HT-8	3.20

PART NO.	PRICE
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JACK LOCKS Page 23	
JL-625	\$ 9.00
JL-875	11.50
JL-1250	18.00

FIXTURE KEYS Page 10	
K-500	ea. \$.65
K-562	ea. .70
K-625	ea. .75
K-687	ea. .80
K-750	ea. .85
K-812	ea. .90

PART NO.	1-23 Pcs.	24-143 Pcs.	144-383 Pcs.	384 Pcs. & Up
LEVELING PADS Page 14				
LP-500	3.80	3.55	3.50	3.45
LP-625	6.10	5.85	5.80	5.75

HEX NUTS Page 5		
N-250	\$.12	
N-31214	
N-37516	
N-50018	
N-62525	
N-75030	
N-87535	
N-100040	

ACORN NUTS Page 5		
NA-375	\$.45	
NA-50055	
NA-62570	
NA-75085	

COLLAR NUTS Page 5		
NC-250	\$.60	
NC-37580	
NC-500	1.00	
NC-625	1.25	
NC-750	1.40	
NC-875	1.50	
NC-1000	1.75	
NC-250F60	
NC-375F80	
NC-500F	1.00	
NC-625F	1.25	
NC-750F	1.40	
NC-875F	1.50	
NC-1000F	1.75	

SCREW CHECK NUTS Page 12		
NCS-190	\$.50	
NCS-25050	
NCS-31250	
NCS-37550	
NCS-50050	
NCS-62550	

EXTENSION NUTS Page 5		
NE-375	\$.45	
NE-50060	
NE-62570	
NE-75085	

EXTRA HEAVY NUTS Page 5		
NH-375	\$.20	

KH-653	pr. 6.50
KH-655	pr. 6.50
KH-665	pr. 6.50
KH-766	pr. 6.50
KH-866	pr. 6.50
KH-876	pr. 6.50
KR-750	pr. 5.50
KR-860	pr. 5.00
KR-866	pr. 6.50
KS-6250	ea. 2.25
KS-7562	ea. 2.25
KS-8168	ea. 2.75

NH-50025
NH-62530
NH-75035

JAM NUTS Page 5		
NJ-250	\$.11	
NJ-31213	
NJ-37515	
NJ-50017	
NJ-62520	
NJ-75025	
NJ-87535	
NJ-100040	

SPHERICAL COLLAR NUTS Page 5		
NS-250	\$.80	
NS-37585	
NS-500	1.00	
NS-625	1.25	
NS-750	1.50	
NS-875	1.75	
NS-1000	1.80	

SWIVEL SHOE NUTS Page 15		
NSS-190	\$.50	
NSS-25055	
NSS-31260	
NSS-37565	
NSS-50075	
NSS-62580	
NSS-750	1.00	

TEE SLOT NUTS Page 5		
NT-312	\$.70	
NT-37570	
NT-37670	
NT-37775	
NT-50075	
NT-50185	
NT-50290	
NT-62590	
NT-62695	
NT-627	1.25	
NT-750	1.25	
NT-751	1.25	
NT-752	1.40	

INDEX PLUNGERS

Page 17

STRAIGHT	TAPERED	1-24	25-49	50-99	100-Up
PI-50	PIT-50	\$13.65	\$12.95	\$12.50	\$11.95
PI-50X	PIT-50X	13.20	12.55	12.00	11.50
PI-75	PIT-75	15.00	14.25	13.80	13.15
PI-75X	PIT-75X	14.60	13.85	13.45	12.75
PICR-50	PITCR-50	14.90	14.15	13.70	13.05
PICR-50X	PITCR-50X	14.50	13.80	13.35	12.70
PICR-75	PITCR-75	16.15	15.35	14.85	14.15
PICR-75X	PITCR-75X	15.00	14.25	13.80	13.15
INDEX PLUNGER BUSHINGS					
PIB-50	PIBT-50	2.20	1.92	1.65	1.48
PIB-50X	PIBT-50X	1.90	1.68	1.45	1.30
PIB-75	PIBT-75	2.40	2.10	1.80	1.63
PIB-75X	PIBT-75X	2.25	1.95	1.68	1.50
PITA-50	TAPERED GRINDING ARBORS				9.00
PITA-75					10.75

SPRING PLUNGERS-BALL

Page 11

Standard	With Nylak	1-11 Pcs.	12-143	144-503	504 & Up
PB-40	PBN-40	\$1.85	\$1.60	\$1.55	\$1.50
PB-50	PBN-50	1.75	1.50	1.45	1.40
PB-60	PBN-60	1.65	1.40	1.35	1.30
PB-80	PBN-80	1.55	1.30	1.25	1.20
PB-100	PBN-100	1.45	1.20	1.15	1.10
PB-101	PBN-101	1.45	1.20	1.15	1.10
PB-102	PBN-102	1.45	1.20	1.15	1.10
PB-250	PBN-250	1.35	1.10	1.05	1.00
PB-251	PBN-251	1.35	1.10	1.05	1.00
PB-252	PBN-252	1.35	1.10	1.05	1.00
PB-312	PBN-312	1.35	1.10	1.05	1.00
PB-313	PBN-313	1.35	1.10	1.05	1.00
PB-314	PBN-314	1.35	1.10	1.05	1.00
PB-375	PBN-375	1.45	1.20	1.15	1.10
PB-376	PBN-376	1.45	1.20	1.15	1.10
PB-377	PBN-377	1.45	1.20	1.15	1.10
PB-500	PBN-500	1.55	1.30	1.25	1.20
PB-501	PBN-501	1.55	1.30	1.25	1.20
PB-502	PBN-502	1.55	1.30	1.25	1.20
PB-625	PBN-625	1.85	1.60	1.55	1.50
PB-626	PBN-626	1.85	1.60	1.55	1.50
PB-627	PBN-627	1.85	1.60	1.55	1.50

Total pieces ordered determines unit price.

BALL DETENTS

Page 11

PART NO.	1-11 Pcs.	12-143	144-503	504 & Up
PBD-4085	.60	.55	.50
PBD-6085	.60	.55	.50
PBD-8085	.60	.55	.50
PBD-10090	.65	.60	.55
PBD-31295	.70	.65	.60
PBD-375	1.00	.75	.70	.65
PBD-500	1.10	.85	.80	.75
PBD-625	1.20	.95	.90	.85

SPRING PLUNGERS-HARD NOSE

Page 11

HEAVY PRESS.	WITH NYLOK	STAND.	WITH NYLOK	1-11 Pcs.	12-143	144-503	504 & Up
PS-6	PSN-6	PSL-6	PSLN-6	\$1.60	\$1.35	\$1.30	\$1.25
PS-6A	PSN-6A	PSL-6A	PSLN-6A	1.60	1.35	1.30	1.25
PS-8	PSN-8	PSL-8	PSLN-8	1.60	1.35	1.30	1.25
PS-10	PSN-10	PSL-10	PSLN-10	1.60	1.35	1.30	1.25
PS-25	PSN-25	PSL-25	PSLN-25	1.55	1.30	1.25	1.20
PS-26	PSN-26	PSL-26	PSLN-26	1.45	1.20	1.15	1.10
PS-27	PSN-27	PSL-27	PSLN-27	1.55	1.30	1.25	1.20
PS-31	PSN-31	PSL-31	PSLN-31	1.55	1.30	1.25	1.20
PS-37	PSN-37	PSL-37	PSLN-37	1.55	1.30	1.25	1.20
PS-50	PSN-50	PSL-50	PSLN-50	1.55	1.30	1.25	1.20
PS-62	PSN-62	PSL-62	PSLN-62	2.10	1.85	1.80	1.75
PS-75	PSN-75	PSL-75	PSLN-75	2.40	2.15	2.10	2.05
PS-100	PSN-100	PSL-100	PSLN-100	3.10	2.85	2.80	2.75

Total pieces ordered determines unit price.

SPRING PLUNGERS-NYLON NOSE

Page 11

HEAVY PRESS.	WITH NYLOCK	STAND.	WITH NYLOCK	1-11 Pcs.	12-143	144-503	504 & Up
PS-8N	PSN-8N	PSL-8N	PSLN-8N	\$1.70	\$1.45	\$1.40	\$1.35
PS-10N	PSN-10N	PSL-10N	PSLN-10N	1.70	1.45	1.40	1.35
PS-25N	PSN-25N	PSL-25N	PSLN-25N	1.65	1.40	1.35	1.30
PS-26N	PSN-26N	PSL-26N	PSLN-26N	1.55	1.30	1.25	1.20
PS-27N	PSN-27N	PSL-27N	PSLN-27N	1.65	1.40	1.35	1.30
PS-31N	PSN-31N	PSL-31N	PSLN-31N	1.65	1.40	1.35	1.30
PS-37N	PSN-37N	PSL-37N	PSLN-37N	1.65	1.40	1.35	1.30
PS-50N	PSN-50N	PSL-50N	PSLN-50N	1.65	1.40	1.35	1.30
PS-62N	PSN-62N	PSL-62N	PSLN-62N	2.20	1.95	1.90	1.85

Total pieces ordered determines unit price.

REST BLOCKS

Page 19

RB-100	\$3.25
RB-200	4.25

TOOL BIT SLEEVES

Page 3

SBT-19	\$2.60
SBT-25	3.00
SBT-31	3.15
SBT-37	3.25
SBT-43	3.55
SBT-50	4.00
SBT-62	4.50
SBT-75	5.35

HEX HEAD JIG SCREWS

Page 8

SHH-250	\$.65
SHH-25165
SHH-25270
SHH-25370
SHH-31275
SHH-31375
SHH-313X80
SHH-31480
SHH-31585
SHH-37585
SHH-37685
SHH-37790
SHH-37890
SHH-501	1.10

SHH-502	1.15
SHH-503	1.20
SHH-504	1.30
SHH-505	1.40
SHH-625	1.40
SHH-626	1.55
SHH-627	1.70
SHH-628	1.85

HAND KNOB JIG

SCREWS

Page 8

SHK-250	\$1.00
SHK-251	1.10
SHK-252	1.15
SHK-253	1.20
SHK-313	1.20
SHK-313X	1.25
SHK-314	1.25
SHK-315	1.30
SHK-375	1.30
SHK-376	1.35
SHK-377	1.45
SHK-378	1.50
SHK-500	1.55
SHK-501	1.60
SHK-502	1.65
SHK-503	1.70
SHK-504	1.75
SHK-625	1.80
SHK-626	1.85
SHK-627	1.90
SHK-628	1.95

KNURLED HEAD

JIG SCREWS

Page 8

SKH-190	\$.45
SKH-19145
SKH-19245
SKH-25045
SKH-25145
SKH-25250
SKH-25350
SKH-31355
SKH-313X55
SKH-31460
SKH-31565
SKH-37565
SKH-37665
SKH-37770
SKH-37870
SKH-50090
SKH-50195
SKH-50395
SKH-504	1.00
SKH-505	1.10

QUARTER TURN

SCRE

PART NO.	PRICE	PART NO.	PRICE
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**SHOULDER
SCREWS**

Page 9

SS-251 THRU SS-256.....	\$.45 each	SS-503 THRU SS-508.....	\$.60 each
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SS-311 THRU SS-316.....	\$.50 each	SS-624 THRU SS-628.....	\$.75 each
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SS-371 THRU SS-376.....	\$.55 each	SS-754 THRU SS-758.....	\$1.00 each
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SPRING STOPS

Page 14

PART NO.	1-11 Pcs.	12-143 Pcs.	144-503 Pcs.	504 & Up
ST-5	\$1.95	\$1.70	\$1.65	\$1.60
ST-10	2.40	2.15	2.10	2.05
ST-10A	2.40	2.15	2.10	2.05
ST-20	2.65	2.40	2.35	2.30

Total pieces ordered determines unit price.

TORQUE SCREWS

Page 12

PART NO.	1-5 Pcs.	6-59	60-107	108 & Up
STA-375	\$5.30	\$4.85	\$4.65	\$4.40
STA-376	5.30	4.85	4.65	4.40
STA-378	5.65	5.20	5.00	4.75
STA-500	5.30	4.85	4.65	4.40
STA-501	5.30	4.85	4.65	4.40
STA-502	5.65	5.20	5.00	4.75
STA-503	5.65	5.20	5.00	4.75
STA-504	5.65	5.20	5.00	4.75
STAS-375	6.10	5.65	5.45	5.20
STAS-500	6.45	6.00	5.80	5.55
STI-250	4.65	4.20	4.00	3.75
STI-375	4.75	4.30	4.10	3.85
STI-500	4.85	4.40	4.20	3.95
STI-600	4.85	4.40	4.20	3.95
STR-190	4.15	3.70	3.50	3.25
STR-250	4.15	3.70	3.50	3.25
STR-251	4.15	3.70	3.50	3.25
STR-312	4.35	3.90	3.70	3.45
STR-313	4.35	3.90	3.70	3.45
STR-315	4.50	4.05	3.85	3.60
STR-375	4.35	3.90	3.70	3.45
STR-376	4.35	3.90	3.70	3.45
STR-378	4.50	4.05	3.85	3.60
STR-500	4.35	3.90	3.70	3.45
STR-501	4.35	3.90	3.70	3.45
STR-502	4.50	4.05	3.85	3.60
STR-503	4.50	4.05	3.85	3.60
STR-504	4.50	4.05	3.85	3.60
STR-625	4.35	3.90	3.70	3.45
STR-628	4.50	4.05	3.85	3.60
STRS-250	4.95	4.50	4.30	4.05
STRS-312	5.05	4.60	4.40	4.15
STRS-375	5.10	4.65	4.45	4.20
STRS-500	5.20	4.75	4.55	4.30

Total pieces ordered determines unit price.

TOGGLE SHOE CLAMPS

Page 15

TA-251, T-311.....	\$1.90	TA-503, T-504.....	2.50
TA-253, T-312.....	1.95	TA-504, T-505.....	2.70
TA-312, T-313.....	1.90	T-622.....	2.50
TA-315, T-314.....	1.95	TA-626, T-623.....	2.60
T-371.....	1.95	TA-627, T-624.....	2.85
TA-376, T-372.....	1.95	TA-628, T-625.....	3.10
TA-377, T-373.....	2.15	T-752.....	2.75
TA-378, T-374.....	2.35	TA-726, T-753.....	2.85
T-502.....	2.20	TA-727, T-754.....	3.10
TA-502, T-503.....	2.30	TA-728, T-755.....	3.35

TOGGLE PADS AND SHOES

Page 15

PART NO.	1-23 Pcs.	24- 143	144- 383	384 & Up
TP-190	\$1.50	\$1.25	\$1.20	\$1.15
TP-250, TS-250	1.50	1.25	1.20	1.15

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PART NO.	PRICE	PART NO.	PRICE
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PART NO.	1-23 Pcs.	24- 143	144- 383	384 & Up
TP-312, TS-312	1.55	1.30	1.25	1.20
TP-375, TS-375	1.60	1.35	1.30	1.25
TP-500, TS-500	1.70	1.45	1.40	1.35
TP-625, TS-625	1.80	1.55	1.50	1.45
TP-750,	2.50	2.25	2.20	2.15
TP-1000	3.85	3.60	3.55	3.50

Total pieces ordered determines unit price.

TOGGLE SCREWS

Page 13

PART NO.	1-11 Pcs.	12- 143	144- 503	504 & Up
TSH-253	\$2.35	\$2.10	\$2.05	\$2.00
TSH-254	2.45	2.20	2.15	2.10
TSH-313	2.35	2.10	2.05	2.00
TSH-314	2.35	2.10	2.05	2.00
TSH-315	2.45	2.20	2.15	2.10
TSH-373	2.55	2.30	2.25	2.20
TSH-374	2.55	2.30	2.25	2.20
TSH-375	2.70	2.45	2.40	2.35
TSH-376	2.70	2.45	2.40	2.35
TSH-503	2.85	2.60	2.55	2.50
TSH-504	2.85	2.60	2.55	2.50
TSH-505	3.35	3.10	3.05	3.00
TSH-506	3.35	3.10	3.05	3.00
TSS-252	1.15	.90	.85	.80
TSS-253	1.20	.95	.90	.85
TSS-254	1.20	.95	.90	.85
TSS-256	1.25	1.00	.95	.90
TSS-313	1.20	.95	.90	.85
TSS-314	1.30	1.05	1.00	.95
TSS-316	1.45	1.20	1.15	1.10
TSS-318	1.65	1.40	1.35	1.30
TSS-373	1.20	.95	.90	.85
TSS-374	1.35	1.10	1.05	1.00
TSS-376	1.50	1.25	1.20	1.15
TSS-378	1.65	1.40	1.35	1.30
TSS-503	1.40	1.15	1.10	1.05
TSS-504	1.45	1.20	1.15	1.10
TSS-506	1.65	1.40	1.35	1.30
TSS-508	1.85	1.60	1.55	1.50
TSS-512	1.90	1.65	1.60	1.55
TSS-624	1.65	1.40	1.35	1.30
TSS-628	2.30	2.05	2.00	1.95
TSS-632	2.35	2.10	2.05	2.00

Total pieces ordered determines unit price.

PLAIN WASHERS

Page 6

W-250.....	\$.20	W-502.....	.65
W-312.....	.25	W-625.....	.45
W-375.....	.30	W-626.....	.55
W-376.....	.35	W-750.....	.50
W-500.....	.40	W-751.....	.65
W-501.....	.45	W-1000.....	.70

PULL DOWEL PINS

Page 13

SIZE	1/4	5/16	3/8	1/2	5/8	3/4	1
1	.30	.34	.38	.42			
1-1/4	.34	.38	.40	.45			
1-1/2	.38	.40	.43	.48	.50		
1-3/4	.40	.42	.44	.49			
2		.43	.45	.50	.53	.68	1.40
2-1/4				.58			
2-1/2				.55	.65	.88	1.55
3				.60	.68	1.10	2.00
3-1/2						1.35	

STUDS-STYLES A or B

Page 14

SIZE	1/4-20	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10
2	\$.25	\$.35	\$.35	-	-	-
2-1/4	.25	.35	.35	-	-	-
2-1/2	.25	.35	.35	\$.45	-	-
2-3/4	.30	.40	.40	.43	-	-
3	.30	.40	.40	.45	\$.55	\$.65
3-1/2	.35	.40	.40	.45	.60	.70
4	.35	.40	.40	.50	.65	.75
4-1/2	-	-	.45	.50	.65	.80
5	-	-	.45	.55	.70	.85
5-1/2	-	-	-	.55	.75	.90
6	-	-	-	.60	.80	.90
7	-	-	-	-	.85	1.00
8	-	-	-	-	.90	1.10

**PLAIN "C"
WASHERS**

Page 6

WC-250.....	\$.70
WC-251.....	.75
WC-252.....	.80
WC-253.....	.85
WC-313.....	.90
WC-375.....	.80
WC-376.....	1.00
WC-377.....	1.10
WC-378.....	1.20
WC-379.....	1.30
WC-501.....	1.30
WC-503.....	1.70
WC-625.....	1.50
WC-751.....	1.75
WC-876.....	2.20

**SWINGING "C"
WASHERS**

Page 6

WCS-190.....	\$2.25
WCS-250.....	2.25
WCS-312.....	2.25
WCS-375.....	2.50
WCS-500.....	3.00
WCS-625.....	3.50
WCS-750.....	4.00

**STAMPED PLAIN
WASHERS**

Page 6

WP-375.....	\$.14
WP-500.....	.16
WP-625.....	.20
WP-750.....	.26

**SPHERICAL
WASHERS**

Page 6

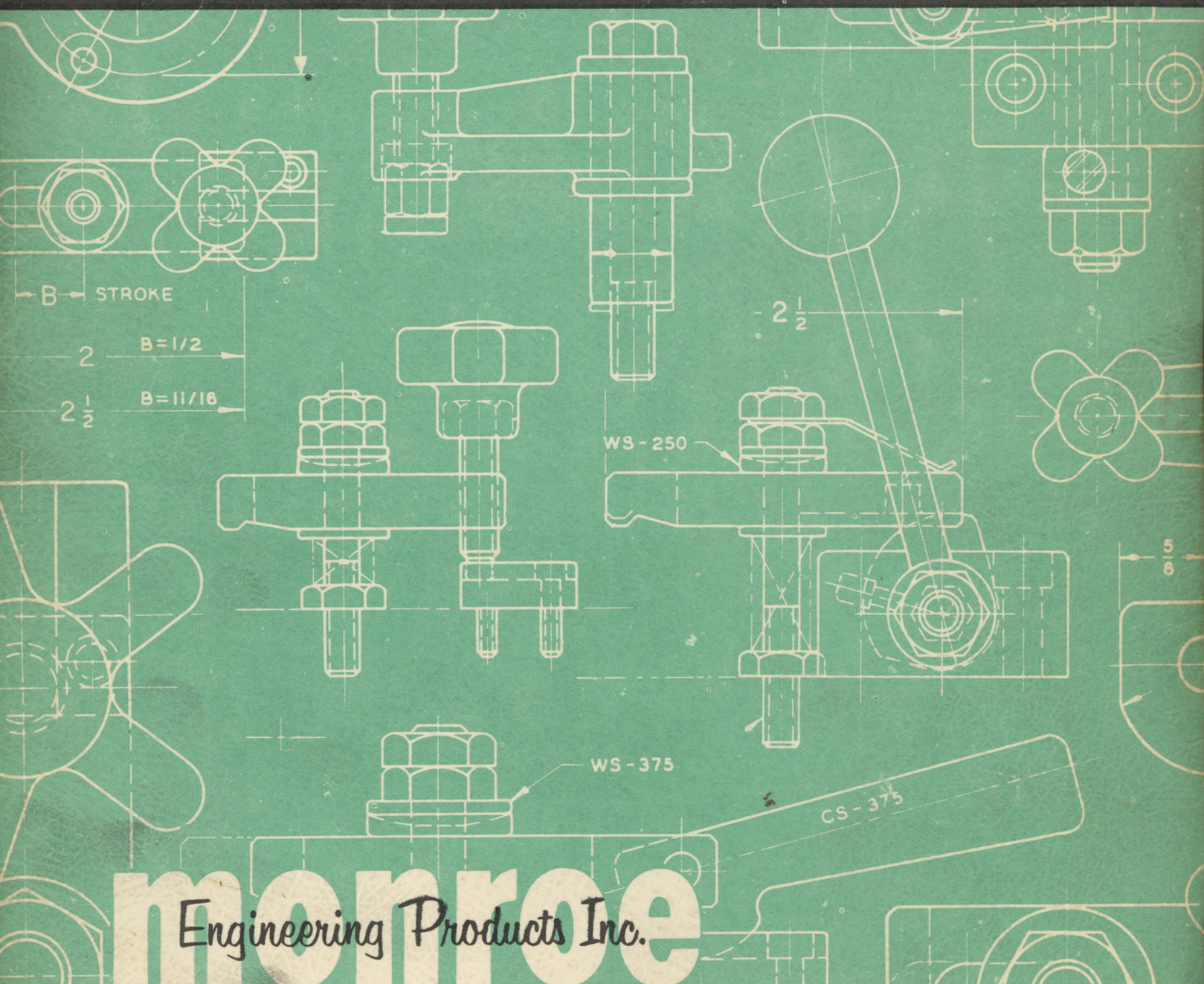
WS-250.....	Pr.	\$.60
WS-312.....	"	.80
WS-375.....	"	.90
WS-500.....	"	1.05
WS-625.....	"	1.25
WS-750.....	"	1.70
WS-875.....	"	2.10
WS-1000.....	"	2.40
WS-1125.....	"	2.90
WS-1250.....	"	3.15
WS-1500.....	"	3.40

YOKE ENDS

Page 13

YA-25.....	\$.70
YA-31.....	.75
YA-37.....	.80
YA-50.....	1.15
YA-62.....	1.95
YA-75.....	2.90
YP-25.....	.60
YP-31.....	.65
YP-37.....	.70
YP-50.....	.90
YP-62.....	1.30
YP-75.....	1.90

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